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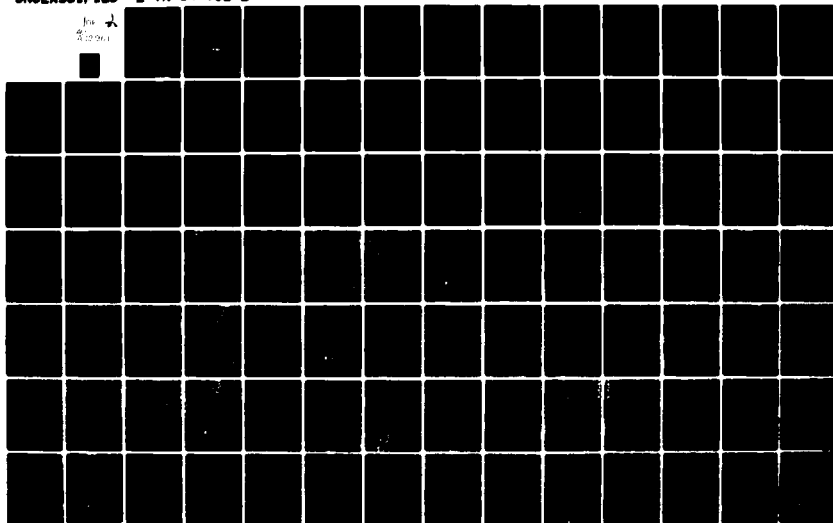
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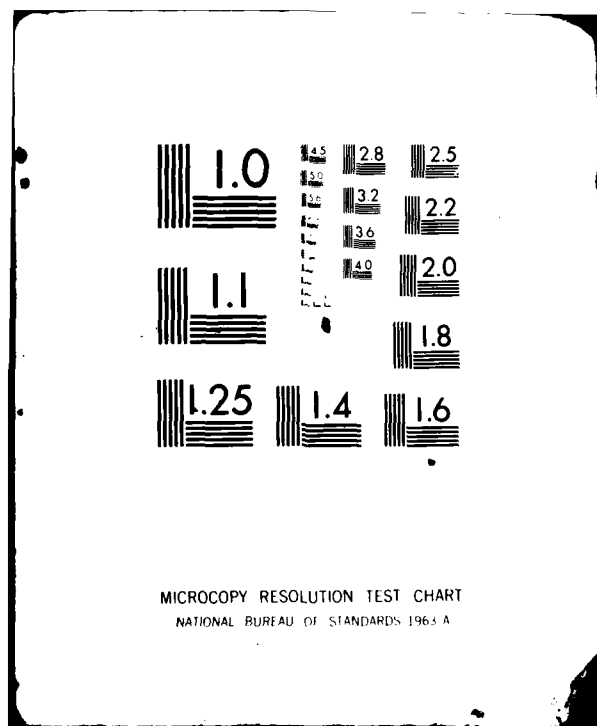
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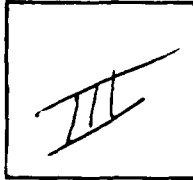




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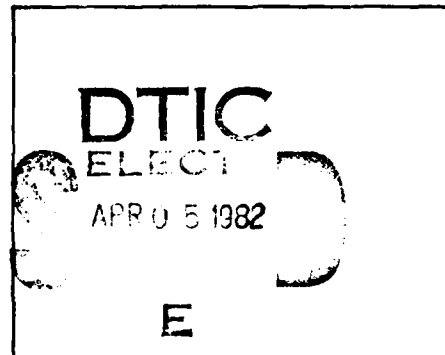
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**Ertec**  
The Earth Technology Corporation



FAULTS AND LINEAMENTS IN THE  
MX SITING REGION, NEVADA AND UTAH

VOLUME II

Prepared for:

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) <b>Analyses the fault study in Nevada and Utah show that the faults in the MX deployment area have quite a few have been active in Quaternary time. Earthquakes in the 7-73/4 magn. range have occurred in the study area during late Quaternary time. Quaternary in the study area south and west of the study area have been active in the</b>		

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FAULT TABLES AND FAULT MAPS

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TABLE A1

LIST OF ABBREVIATIONS USED ON TABLES A2 and A3

A1	Active stream channel alluvium	Tv <sub>3</sub>	Late Tertiary volcanic rock (6 to 17 million years old)
A3s	Thin sheets of wind-blown sand		
A4	Shoreline features	Tv <sub>2</sub>	Middle Tertiary volcanic rock (17 to 34 million years old)
A5y	Young-age alluvial fan	Tv <sub>1</sub>	Early Tertiary volcanic rock (34 to 43 million years old)
A5i	Intermediate-age alluvial fan		
A5o	Old-age alluvial fan	Pz	Paleozoic rock
A6	Older Pleistocene and Tertiary lacustrine sediments	Holo.	Holocene (< 10,000 years)
Qs	Undifferentiated Quaternary sedimentary rock	Pleist.	Pleistocene (10,000 years to 1.8 million years)
		Indeter.	Indeterminate
Ts	Undifferentiated Tertiary sedimentary rock	Quat.	Quaternary (0 to 1.8 million years)
Tv	Undifferentiated Tertiary volcanic rock		
Qv	Quaternary volcanic rock (0 to 1.8 million years old)		
Tv <sub>4</sub>	Latest Tertiary volcanic rock (1.8 to 6 million years old)		

NOTE: Displaced-unit designations separated by a slash (/) represent undifferentiated stratigraphic units; designations separated by a semicolon (;) represent two separate stratigraphic units.

TABLE A2  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.	YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
<u>ANTELOPE VALLEY</u>									
1	MAHOGANY HILLS (Plate A2)	5 (8)	5 (2)		A5y	A5i	Pz	late Pleist.	Comprises parallel and en echelon breaks that trend into bedrock
2	ANTELOPE VALLEY (Plate A2)	18 (29)	135 (14)	21°	A5y	A5i	Pz	late Pleist.	Composed of three segments; geomorphic features along 135-ft-high scarp in northern segment may indicate recur- rent movement
3	ANTELOPE PEAK (Plate A2)	5 (8)			A5y	A5i	TV2	late Pleist.	
<u>BIG SAND SPRINGS VALLEY</u>									
4	NORTH BIG SAND SPRINGS (Plate A6)	6 (10)				A5i	A5o	late Pleist.	
5	PORTUGUESE MOUNTAIN (Plate A6)	17 (27)	88 (27)	23°	A5y	A5i	Pz	late Pleist.	
6	CENTRAL BIG SAND SPRINGS (Plate A6 and A7)	7 (11)				A5i	TV1	late Pleist.	Comprises parallel scarps up to 1 mi long
7	SQUAW HILLS (Plate A7)	11 (18)			A5y	A5i	TV2	Indeter.	

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST			YOUNGEST			PROBABLE			COMMENTS
					SCARP NOT DISPL.	UNIT DISPL.	UNIT DISPL.	SCARP NOT DISPL.	UNIT DISPL.	UNIT DISPL.	SCARP NOT DISPL.	UNIT DISPL.	UNIT DISPL.	
					UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	
BIG SMOKY VALLEY														
8	MILLERS POND (Plate A7)	5+ (8)+	17 (5)	21.5°	A5i	A5i	A5i	A5i	A5o		Holo.			Holocene age based on strong geomorphic expression of scarp; part of longer fault system which extends beyond study area
9	TOIYABE (Plate A7)	50+ (80)+	40+ (12)+	30°	A5y		A5i	A5i	Pz		late Pleist.			Primarily bedrock-alluvium contact with only minor scarps in alluvium, steepness of scarp is due to bedrock pedi- ment
10	CRESCENT DUNES (Plate A7)	19 (30)	13 (4)	5°	A5i		A5i	A5i	Tv2		late Pleist.			Some segments may be early Pleistocene
11	MONTEZUMA RANGE (Plate A8)	11+ (18)+			A5y		A5i	A5i	A5o		late Pleist			
12	PAYMASTER CANYON (Plate A8)	10+ (16)+			A5i		A5o	A5o	A5o		middle to early Pleist.			



TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					SCARP NOT DISPL.	UNIT DISPL.				
<u>BUTTE VALLEY</u>										
13	CHERRY CREEK (Plate A3)	12 (19)	8 (2.4)	6.5°	A5y	A5y	A5y	Pz	Holo.	Scarp cuts shoreline
14	BUTTE VALLEY (Plate A3)	8 (13)	<5 <(1.5)		A5y	A5y	A5y	A5y	Holo.	
15	MEDICINE RANGE (Plates A1 and A3)	14 (22)			A5y	A5i	A5i	Tv <sub>1</sub>	late Pleist.	Comprises zone of short scarps and lineaments
16	TAYLOR PEAK (Plates A1 and A3)	22 (35)			A5i	Pz	Pz	Pz	Indeter. (late Pleist.)	Well-developed bedrock-A5i scarp suggests late Pleist. age
17	SMITH VALLEY (Plate A3)	20 (32)			A5i	Pz	Pz	Pz	Indeter.	
<u>CAVE VALLEY</u>										
18	SIDEHILL PASS (Plate A6)	7 (11)			A5i	Tv <sub>2</sub>		Pz	Indeter.	
<u>COAL VALLEY</u>										
19	COAL VALLEY (Plates A6 and A9)	5 (8)	<1 <(0.3)	<1°	A5y	A5y	A5y	A5i	Holo.	Lineaments account for 3 mi of total zone length; scarp, if present, is too subtle to measure

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT		MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT		COMMENTS
			ft (m)	ft (m)		DISPL.	DISPL.			DISPL.	MOVEMENT	
COAL VALLEY (cont'd)												
20	GOLDEN GATE (Plate A9)	5 (8)	6 (1.8)			A5Y	A5Y	A5i			Holo.	
21	NORTH GOLDEN GATE (Plate A6)	3 (5)				A5Y	A5i	TV2			late Pleist.	
22	SOUTHEAST COAL VALLEY (Plate A9)	5 (8)				A4o	A5i	TV2			late Pleist.	May connect through North Pahranagat Range to late- Pleistocene scarps in Pahranagat Valley for a total length exceeding 12 mi
COYOTE-KANE VALLEY												
23	COYOTE SPRING (Plate A9)	10+ (16)+				A5Y	A5i	Pz			late Pleist.	Merges with Kane Springs Wash fault
24	ARROW CANYON RANGE (Plate A11)	8 (13)				A5Y	A5i	Pz			late Pleist.	Intersects Transector fault at northern end
25	WILDCAT WASH (Plate A11)	11 (18)				A5Y	A5i	Pz			late Pleist.	Primarily at bedrock- alluvium contact with several short late Pleis- tocene scarps and bedrock faults

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT NOT DISPL.	UNIT DISPL.				
<u>COYOTE-KANE VALLEY (cont'd)</u>										
26	MEADOW MOUNTAIN (Plates A9 and A11)	9 (14)			A5y	A5i	Pz	late Pleist.	Merges with Kane Springs Wash fault on north end	
27	SHEEP RANGE (Plates A9 and A11)	19 (30)			A5y	A5i	Pz	late Pleist.		
28	TRANSECTOR (Plate A11)	4 (16)			A5y	A5i	A5o	late Pleist.	NE-SW trending scarp par- allel to Pahrnagat shear zone	
29	KANE SPRINGS WASH (Plates A9 and A11)	37 (59)			A5y	A5i	Pz	late Pleist.		
<u>DELAMAR VALLEY</u>										
30	DELAMAR MOUNTAINS (Plate A9)	4 (6)			A5y/ A5i	A5i	Pz	late Pleist.		
31	DELAMAR VALLEY (Plate A9)	3 (5)	8 (2.4)		A5y	A5i	Pz	late Pleist.		

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST		OLDEST		PROBABLE		COMMENTS
					UNIT NOT DISPL.	UNIT DISPL.	UNIT DISPL.	UNIT DISPL.	AGE OF LAST MOVEMENT	MOVEMENT			
<u>DELAMAR VALLEY (cont'd)</u>													
32	MAYNARD LAKE (Plate A9)	28+ (45)+			A5i		A5i		TV2		Pleist.		Longest fault in Pahrnagat shear zone; late-Pleistocene age based on minor scarp in Pahrnagat Valley; remainder of trace shows no evidence of Quaternary movement; abundant low-angle slickensides indicate complex-oblique slip movements, possibly strike-slip
33	PAHROC (Plate A9)	26 (42)			A5i		A5o		Pz		middle to early Pleist.		Northern portion of zone offsets A5o fan; rest of zone is at bedrock-alluvium contact or within bedrock
34	BUCKHORN (Plate A9)	17 (27)			A5i		TV2		TV2		Indeter. (Pliocene)		One of major faults in Pahrnagat shear zone, strong magnetic expression, but no evidence of Quaternary rupture
<u>DRY LAKE VALLEY</u>													
35	WEST DRY LAKE (Plate A9)	4 (6)		<5°	A5y		A5y		A5y		Holo.		Scarp is too subtle to measure

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT	NOT				
					DISPL.	DISPL.				
<u>DRY LAKE VALLEY (cont'd)</u>										
36	DRY LAKE (Plates A6 and A9)	34 (54)	36 (11)	17°	A5y	A5i	A5i	A5i	late Pleist.	Fault is characterized by graben approximately 500 ft wide
37	BLIND MOUNTAIN (Plate A6)	13 (21)			A5i/ A5o	A5i	TV2		late Pleist.	A5o/A5i fan covers portions of northern zone
<u>DUGWAY VALLEY</u> NO MAJOR QUATERNARY FAULTS										
<u>ESCALANTE DESERT</u>										
38	MUD SPRINGS HILLS (Plate A10)	4+ (6) +			A5Y	A5Y	TV1		Holo.	May be related to Newcastle Fault zone
39	ZANE (Plate A10)	3 (5)			A3s	A4	A4		Holo.	Zone comprises three right- stepping en echelon segments that indicate down-to-west displacement
40	ESCALANTE (Plate A5)	28 (45)	28 (9)	17°	A5Y	A5i or A1	TV		late Pleist. or Holo.	Expression in A1 may rep- resent vegetation in ex- humed water-saturated fault

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT NOT DISPL.	UNIT DISPL.				
<u>ESCALANTE DESERT (cont'd)</u>										
41	NEWCASTLE (Plate A10)	27 (43)			A5Y		A5i	TV <sub>1</sub>	late Pleist.	Comprises five right- stepping en echelon breaks 3 to 6 mi long
42	MINERSVILLE (Plate A10)	5 (8)			A5Y		A5i	A5i	late Pleist.	Fault consists of two breaks plus parallel line- aments
<u>FISH SPRINGS FLAT</u>										
43	FISH SPRINGS (Plate A4)	10 (16)	20 (6)	27°	A5Y		A5Y	Pz	Holo.	Scarp probably formed in one event; zone is left- stepping en echelon pattern with three segments
<u>GARDEN VALLEY</u>										
44	SCOFIELD CANYON (Plate A6)	15 (24)			A5Y		A5i	TV <sub>2</sub>	late pleist.	Two broadly spaced right- stepping en echelon seg- ments
45	COTTONWOOD CREEK (Plates A6 and A9)	6 (10)	3 (1)	<5°	A1		A5i	TV <sub>2</sub>	late pleist.	Possible northward continu- ation of Penoyer fault
46	EAST GARDEN VALLEY (Plate A6)	4 (6)					A5i	TV <sub>2</sub>	late pleist.	

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TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST		OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT NOT DISPL.	DISPL.	UNIT DISPL.	DISPL.			
GARDEN VALLEY (cont'd)											
47	FREIBURG (Plate A9)	11 (18)			A5i		Pz		Pz	Indeter. (Quat.)	
HAMLIN VALLEY NO MAJOR QUATERNARY FAULTS											
HOT CREEK VALLEY											
48	HART HILLS (Plate A7)	17 (27)			A5i		A5i		TV2	Holo.	Zone of faults at north end of Hot Creek Valley; most scarps are late Pleistocene with some segments having Holocene movement
49	TYBO WELL (Plate A7)	9 (14)			A5y		A5y		A5i	Holo.	
50	HOT CREEK-REVEILLE (Plates A7 and A8)	52 (83)	<440 <(134)	27°	A5y		A5i		TV2	late Pleist.	Highest scarp is a result of at least four episodes of late Tertiary through Quaternary movement
51	HALLIGAN MESA (Plate A7)	8 (13)			A5y		A5i		TV2	Indeter. (Quat.)	Displaces water-laid tuffs of probable Pliocene or early Pleistocene age

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.	YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
JAKES VALLEY									
52	JAKES VALLEY (Plate A3)	8 (13)	8 (2)		A5Y	A5Y	A5i	Holo.	Southern section cuts Holo- cene shoreline
53	EAST JAKES VALLEY (Plate A3)	8 (13)	<50 <(15)		A5Y	A5i	A5o	late Pleist.	
54	MOORMAN RANCH (Plate A3)	7 (11)	11 (3)	6°	A5Y	A5i	Tv1	late Pleist.	
55	JAKES WASH (Plate A3)	8 (13)			A5Y	Tv2 or Tv3	Pz	Indeter.	
KOBEB VALLEY									
56	KOBEH (Plate A2)	15 (24)	3 (0.9)		A5Y	A5Y	Pz	Holo.	
57	THE POINT (Plate A2)	6 (10)			A5Y	A5i	A5i	late Pleist.	
58	LONE MOUNTAIN (Plate A2)	3 (5)			A5Y	A5i	Pz	late Pleist.	Major fault appears to be on west side



TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.	YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
KOBEE VALLEY (cont'd)									
59	SIMPSON PARK MOUNTAIN (Plate A2)	27 (43)	99 (30)	27°	A5y	A5i	Pz	late Pleist.	Highly discontinuous zone of scarps and lineaments along bedrock-alluvium con- tact; composite scarp 165 ft high comprises four slope angles; maximum angle is on lower 99-ft-high slope
LAKE VALLEY									
60	LAKE VALLEY (Plate A6)	9 (14)			A4o	A4o	A4o	late Pleist.	Fault is in Pleistocene lake deposits but is over- lain by undisturbed late Pleistocene shorelines
61	MOUNT GRAFTON (Plate A6)	23 (37)			A5y/ A5i	Tv2	Pz	Indeter.	
LITTLE SMOKY VALLEY									
62	RYE PATCH (Plate A2)	17 (27)			A5i	A5i	Ts	late Pleist.	
63	LITTLE SMOKY (Plate A3)	8 (13)			A5y	A5i	Tv2	late Pleist.	Fault comprises two parallel segments; may align with Rye Patch fault to south

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.	YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
LITTLE SMOKY VALLEY (cont'd)									
64	BLACK POINT (Plate A3)	14 (22)				A5i	Ts	late Pleist.	
65	FISH CREEK RANGE (Plate A2)	26 (42)			A5y	A5i	TV2	late Pleist.	
66	MOODY PEAK (Plates A3, A6, and A7)	8 (13)	12 (4)	4.5°	A5y	A5i	TV2	late Pleist.	Fault splays southward into 2.5-mi-wide zone of scarps
67	BIG FAULT WASH (Plate A7)	10+ (16)+			A5i	TV2	TV2	Indeter. (Quat.)	
LONG VALLEY									
68	EAST LONG VALLEY (Plate A3)	44 (70)	40 (12)	29°	A5y	A5i	A5o	late Pleist.	
69	WEST LONG VALLEY (Plate A3)	21 (34)				A5i	TV1	late Pleist.	Complex zone composed of short scarps of opposite displacements
70	ALLIGATOR RIDGE (Plate A3)	10 (16)			A5y	TV1	TV1	Indeter. (Quat.)	4-mi-long lineament zone at northern end of fault is included in total length

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT NOT DISPL.	UNIT DISPL.				
MONITOR VALLEY (con't)										
71	LONG CANYON (Plate A2)	16 (26)	3 (1)		A5Y	A5Y			Holo.	Zone has had repeated move- ments; the latest of which is Holocene
72	CENTRAL MONITOR VALLEY (Plate A7)	24 (38)	10 (3)	22°	A5Y	A5Y		TV2	Holo.	
73	TOQUIMA (Plates A2 and A7)	28 (45)	33 (10)	17°	A5Y	A5i		Pz	late Pleist.	Primarily at bedrock- alluvium contact with only minor scarps in alluvium
74	BARLEY CREEK (Plate A7)	18 (29)	19 (6)	13°	A5Y	A5i		A5o	late Pleist.	Three major segments form arcuate left-stepping en echelon pattern
75	BELMONT (Plate A7)	16 (26)	10+ (3)+		A5Y	A5i		Pz	late Pleist.	Fault splays out southward into numerous scarps and lineaments; fault may con- tinue northeastward another 3 mi across drainage
76	DIANAS PUNCHBOWL (Plate A2)	11 (18)	3 (1)		A5Y	A5i		A5i	late Pleist.	Scarps indicate complex hors' graben structure; zone comprises two major segments and numerous small scarps



TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.	YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
<u>MULESHOE VALLEY (cont'd)</u>									
82	DUTCH JOHN MOUNTAIN (Plate A6)	10 (16)			A5i	Pz	Pz	Indeter. (Quat.)	
83	PONY SPRING (Plate A6)	7 (11)				TV2	TV2	Indeter. (Quat.)	
<u>NEWARK VALLEY</u>									
84	STRAWBERRY RANCH (Plate A3)	<1 <(0.8)			A5Y	A5Y	A5Y	Holo.	
85	DIAMOND PEAK (Plate A3)	8 (13)	115 (35)	30°	A5Y	A4o	Pz	late Pleist.	Northern portion in A4o may be exhumed; may be related to Rattlesnake and Christine Peak faults
86	CHRISTINA PEAK (Plate A3)	5 (8)	44 (13)	16°	A5Y	A5i	Pz	late Pleist.	Primarily at bedrock- alluvium contact; may be related to Diamond Peak and Rattlesnake Mountain faults
87	RATTLESNAKE MOUNTAIN (Plate A3)	14 (22)			A5Y	A5i	Pz	late Pleist.	Primarily at bedrock- alluvium contact; short parallel scarps cut A5i fans; may be related to Diamond Peak and Christina Peak faults

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST		PROBABLE		COMMENTS
					UNIT NOT DISPL.	DISPL.	UNIT DISPL.	DISPL.	UNIT DISPL.	AGE OF LAST MOVEMENT	
<u>NEWARK VALLEY (cont'd)</u>											
88	EAST NEWARK VALLEY (Plate A3)	17 (27)	33 (10)	21°	A5y	A5i	A5i/ A5o	late Pleist.			
89	MOUNT HAMILTON (Plate A3)	11 (18)			A5y	Pz	Pz	Indeter.			
<u>PAHRANAGAT VALLEY</u>											
90	HICO (Plate A9)	10 (15)	30 (9)	15°	A5y	A5i	TV3	late Pleist.			2-mi-wide zone of sub-parallel scarps and a fault at bedrock-alluvium contact
<u>PAHROC VALLEY</u>											
91	SIX-MILE FLAT (Plate A9)	15 (24)	6 (2)		A5y	A5i	TV2	late Pleist.			Northeasterly-trending fault zone between Pahroc and Hiko faults; comprises two major faults in 3-mi-wide fault zone
92	WHITE RIVER (Plates A6 and A9)	30 (48)			A5i	TV2	Pz	Indeter. (late Tertiary to early Quat.)			Has little relief but is very prominent due to lithic variations on each side of fault; appears to be primarily an exhumed fault in northern portions

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT		YOUNGEST UNIT	DISPL.	OLDEST UNIT	DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					NOT	DISPL.						
<u>PENoyer (SAND SPRING VALLEY)</u>												
93	PENoyer (Plate A9)	35 (56)	29 (9)	22°	A5i		A5i		TV2		late Pleist.	Length includes E-W trending segment at southern end
94	TEMPIUTE (Plate A9)	14 (22)			A5i		Pz		Pz		Indeter. (Quat.)	
<u>PINE VALLEY</u>												
95	WAH WAH MOUNTAINS (Plate A5)	42 (67)			A5i		Pz		Pz		Indeter. (late Tertiary to Quat.)	Primarily within bedrock
96	TUNNEL SPRINGS (Plate A5)	6 (10)			A5i		Pz		Pz		Indeter.	
97	NEEDLE RANGE (Plate A5)	20 (32)			A5i		TV1		TV1		Indeter. (Tertiary)	Indistinct bedrock fault-line scarps
<u>RAILROAD VALLEY</u>												
98	NYALA ROAD (Plate A6)	2 (3)	<1 (<0.3)	<5°	A5Y		A5Y		A5i		Holo.	Cluster of widely spaced faults

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT NOT DISPL.	UNIT DISPL.				
RAILROAD VALLEY (cont'd)										
99	DUCKWATER (Plates A3 and A6)	14 (22)	10 (3)		A5y	A5i	Pz	late Pleist.		Zone is up to 3 mi wide at Duckwater
100	EAST RAILROAD (Plates A3 and A6)	65 (10)	127 (39)	28°	A5y	A5i	Pz	late Pleist.		Portion of scarp has been removed by late Pleistocene shoreline erosion; zone may continue southward into Quinn Canyon; splays into numerous segments at northern end
101	WEST RAILROAD (Plates A7 and A8)	26 (42)	33 (10)	12.5°	A5y	A5i	Tv4	late Pleist.		
102	QUINN CANYON (Plates A6 and A9)	12 (19)				A5o	Pz	Pleist.		Entirely within mountain block
103	ECHO CANYON (Plate A6)	5 (8)				A5i	Pz	late Pleist.		
104	BULL CREEK (Plate A6)	8 (12)			A5y	A5i	Pz	late Pleist.		Primarily at bedrock- alluvium contact
RALSTON VALLEY										
105	SILVER CREEK (Plate A7)	11 (18)			A5y	A5i	A5i	late Pleist.		



TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.	YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
<u>RALSTON VALLEY (cont'd)</u>									
106	SPANISH SPRING (Plate A7)	7 (11)			A5Y	A5i	Pz	late Pleist.	Segments of zone border stream bed and may have been removed by stream erosion
107	MIDWAY HILLS (Plate A7)	20 (32)				A5i	TV2	late Pleist.	May be part of major basin bounding fault at east base of San Antonio Mountains extending from Toquima Range on the north to Mud Lake on the south
108	MEXICAN BUTTE (Plate A7)	10 (16)				A5i	TV3	late Pleist.	
<u>REVEILLE VALLEY</u>									
109	CENTRAL REVEILLE (Plates A7 and A8)	18 (29)			A5Y	A5i	TV4	late to early Pleist.	Indistinct scarps in inter- mediate age fans
110	EAST REVEILLE (Plates A7 and A8)	14 (22)			A5Y	TV2	TV2	Indeter. (probably) late Pleist.	One very short segment in A5o near the southern end of the Reveille Range sug- gests possible Pleist. move- ment along the southern por- tion of the fault

22

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					SCARP SLOPE ANGLE	UNIT NOT DISPL.				
<u>RUBY VALLEY</u>										
111	MAVERICK SPRINGS RANGE (Plate A1)	14 (22)			A5y		A5i	Pz	late Pleist.	
<u>SEVIER DESERT</u>										
112	DRUM MOUNTAIN (Plate A4)	16 (26)	25 (8)	23°	A5y		A5y	A4o	Holo.	Western scarps form an en- echelon zone of four major segments and numerous minor segments; system may repre- sent two discrete faults bounding a narrow graben; may be related to Fumerole Butte and Dugway Fault zones
113	FUMEROLE BUTTE (Plate A4)	8 (13)	22 (7)	27°	A5y		A4	Qv (0.9 my)	Holo.	A 2-mi-wide zone is composed of normal faults which form a series of complex horst- graben structures; may be related to Dugway and Drum Mountain Fault zones
114	DUGWAY (Plate A4)	9 (14)	8 (2.4)	3.5°	A5y		A4	A4o	Holo.	Scarps cut Lake Bonneville high-stand shoreline fea- tures; zone may be related to Drum Mountain and Fum- erole Butte Fault zones

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST		PROBABLE		COMMENTS
					UNIT NOT DISPL.	UNIT DISPL.	UNIT NOT DISPL.	UNIT DISPL.	UNIT NOT DISPL.	UNIT DISPL.	
<u>SEVIER DESERT (cont'd)</u>											
115	SUGARVILLE (Plate A4)	5 (8)			A5y	A5y	A5y	A5y	A5y	Holo.	
116	SHEEPROCK MOUNTAINS (Plate A4)	5 (8)			A5y	A5o	TV2			early Pleist.	
<u>SEVIER LAKE</u>											
117	CRICKET MOUNTAIN (Plate A5)	21 (34)	8 (2.4)	17°	A5y	A5y	A5y	A5i		Holo.	
<u>SNAKE VALLEY</u>											
118	SNAKE VALLEY (Plates A3 and A4)	29 (46)	8 (3.7)	7°	A5y	A4o	A5o	A5o		Holo.	Zone is composed of segments that trend west and northeast
119	DEEP CREEK (Plate A4)	14+ (22)+	44 (13.4)	20°	A5i	A5y	Pz			late Pleist.	
120	LITTLE ROUGH RANGE (Plate A4)	2 (3)			A5y	A5i	TV1			late Pleist.	

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					SCARP NOT DISPL.	UNIT				
					UNIT NOT DISPL.	UNIT DISPL.				
<u>SNAKE VALLEY (cont'd)</u>										
121	SACRAMENTO PASS (Plate A3)	8 (13)	55 (17)	8.5°	A5i	A5o	A5o	Ts	middle Pleist. to late Tertiary	Zone of short scarps greater than 3 mi wide
122	LIME MOUNTAIN (Plates A3 and A6)	7+ (11)+			A5y	Pz	Pz	Pz	Indeter. (Quat.)	
<u>SPRING VALLEY</u>										
123	SOUTHERN SPRING VALLEY (Plates A3 and A6)	32+ (51)+	16.5 (5.0)	18°	A5y	A5y	A5y	A5i	Holo.	Recurrent movement of fault has produced composite scarp in excess of 58 ft
124	SHOSHONE (Plate A6)	15 (24)	98 (30)	14°	A5y	A5i	A5i	A5o	Pleist.	Linearity of southern Snake Range indicates Quaternary faulting but there are only two short, middle- to early- Pleistocene scarps
125	LIMESTONE HILLS (Plate A6)	8 (13)			A5y	Tv2	Tv2	Tv2	Indeter. (Quat.)	

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT NOT DISPL.	UNIT DISPL.				
					STEPPTOE VALLEY					
126	WEST STEPPTOE (Plate A3)	13 (21)	33 (10)	10°	A5y	A5i	A5i	A5i	late Pleist.	Disappears into stream bed on north, may connect with North Steptoe fault, deteri- orates into broad zone of scarps and lineaments to south and merges with Ward Mine Fault
127	CENTRAL STEPPTOE (Plate A3)	13 (21)	44 (13)	10.5°	A5y	A5i	A5i	A5i	late Pleist.	Zone of numerous short, 2- mi-wide segments
128	EAST STEPPTOE (Plates A3 and A6)	19 (30)	30 (9)	14°	A5y	A5i	A5i/ A5o	A5i/ A5o	late Pleist.	Zone of numerous short segments up to 3 mi wide
129	NORTH STEPPTOE (Plates A1 and A3)	55+ (88)+			A5y	A5i	Pz	Pz	late Pleist.	May extend beyond limits of study area to north and may connect with West Steptoe fault on south
130	WARD MINE (Plates A3 and A6)	15 (24)			A5i	Tv <sub>1</sub>	Pz	Pz	Indeter. (Quat.)	
131	CONNORS CANYON (Plates A3 and A6)	12 (35)			A5i	Pz	Pz	Pz	Indeter.	

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST UNIT NOT DISPL.	YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
<u>STONE CABIN VALLEY</u>									
132	WEST STONE CABIN (Plate A7)	30 (48)	27.5 (8)	14°	A5y	A5i	TV2	late Pleist.	
133	CENTRAL STONE CABIN (Plate A7)	22 (35)	20 (6)	26°	A5y	A5i	TV2	late Pleist.	
134	FOUR-MILE BASIN (Plate A7)	7 (11)			A5i	A5i	A5o	late Pleist.	
135	EAST STONE CABIN (Plates A7 and A8)	22 (35)			A5y	A5i	TV2	late Pleist.	Highly discontinuous zone of scarps
<u>TIKABOO VALLEY</u>									
136	TIKABOO (Plate A9)	6 (10)			A5y	A5y/ A5i	A5i	Holo./ late Pleist.	Age of displaced unit un- certain
<u>TULE VALLEY</u>									
137	TULE VALLEY (Plate A4)	12 (19)	8 (2.5)	14°	A5y	A5y	A5i	Holo.	Scarp probably formed during single earthquake
138	NOTCH PEAK (Plate A4)	8 (13)			A5y	A5y	Pz	Holo.	

TABLE A2 (cont'd)  
DATA ON MAJOR FAULTS IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	FAULT NAME (Plate No.)	LENGTH mi (km)	MAX. SCARP HEIGHT ft (m)	MAX. SCARP SLOPE ANGLE	OLDEST		YOUNGEST UNIT DISPL.	OLDEST UNIT DISPL.	PROBABLE AGE OF LAST MOVEMENT	COMMENTS
					UNIT NOT DISPL.	DISPL.				
<u>WAH WAH VALLEY</u>										
139	WAH WAH (Plate A5)	22 (35)	41 (13)	12°	A5y	A5i	A5i	Pz	late Pleist.	
<u>WHIRLWIND VALLEY</u>										
NO MAJOR QUATERNARY FAULTS										
<u>WHITE RIVER VALLEY</u>										
140	PRESTON (Plate A6)	3 (5)	2 (0.6)		A5y	A5y	A5i	A5i	Holo.	
141	EGAN (Plates A3 and A6)	62 (99)	54 (17)	19°	A5y	A5i	A5i	Pz	late Pleist.	Segment north of Lund is at bedrock-alluvium contact only with no A5i displaced
142	DOUGLAS FAULT (Plate A6)	9 (14)			A5y	A5i	A5i	TV <sub>1</sub>	late Pleist.	
143	MURPHY MEADOWS (Plate A6)	5 (8)	35 (11)	11°	A5y	A5i	A5i	TV <sub>2</sub>	late Pleist.	
144	THE COVE (Plate A6)	12 (19)			A5y/ A5i	A5i	A5i	Pz	late Pleist.	

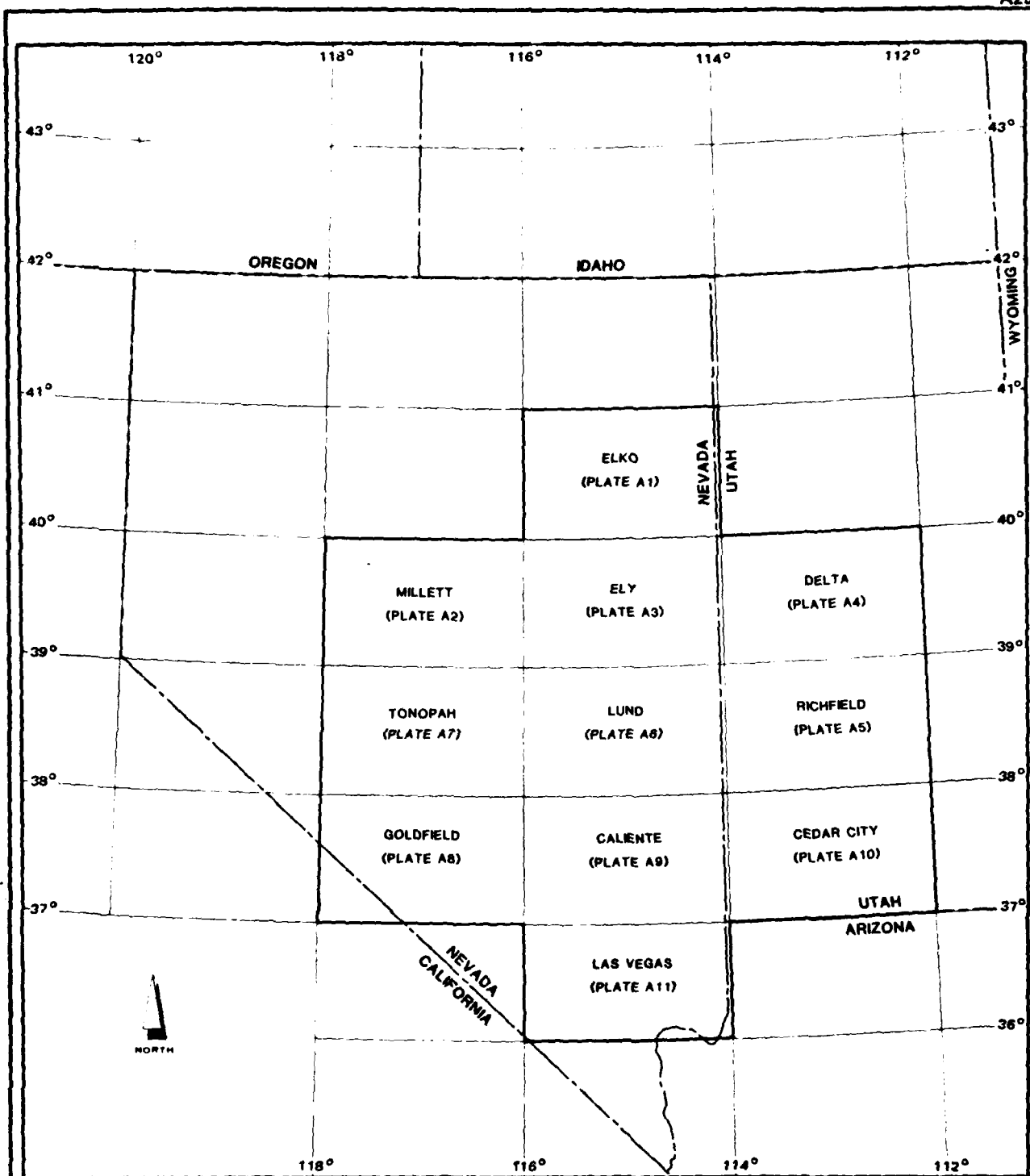
TABLE A3  
DATA ON MAJOR LINEAMENT ZONES IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	LINEAMENT ZONE (Plate No.)	LENGTH mi (km)	WIDTH mi (km)	HOST UNIT	INFERRED AGE	COMMENTS
<u>ANTELOPE AND KOBEH VALLEY</u>						
145	BEAN FLAT (Plate A2)	10 (16)	5 (8)	A5i; A4	late Pleist.	Zone trends predomi- antly east-northeast
<u>BUTTE VALLEY</u>						
146	BUTTE VALLEY (Plate A3)	14 (22)	1 (1.6)	A5i	late Pleist.	Three short faults in- cluded in zone; zone trends northeast
147	ROBBERS ROOST (Plate A3)	5 (8)	1 (1.6)	A5i	late Pleist.	Zone trends north
<u>LAKE VALLEY</u>						
148	WILSON CREEK (Plate A6)	9 (14)	6 (10)	A4o; A5i	late Pleist.	Zone trends north- northeast
<u>LONG VALLEY</u>						
149	LONG VALLEY WASH (Plate A3)	20 (32)	3 (5)	A5y; A5i	late Pleist.	Zone trends northeast



TABLE A3 (cont'd)  
DATA ON MAJOR LINEAMENT ZONES IN THE MX SITING REGION,  
EAST-CENTRAL NEVADA AND WEST-CENTRAL UTAH

No.	LINEAMENT ZONE (Plate No.)	LENGTH mi (km)	WIDTH mi (km)	HOST UNIT	INFERRED AGE	COMMENTS
<u>MULESHOE VALLEY</u>						
150	EAST MULESHOE VALLEY (Plate A6)	3 (5)	2 (3.2)	A5i	late Pleist.	Short graben associated with zone; zone trends north-northeast
151	WEST MULESHOE VALLEY (Plate A6)	10 (16)	1 (1.6)	A5i	late Pleist.	Zone trends north- northeast
<u>SNAKE VALLEY</u>						
152	BAKER (Plate A6)	5 (8)	3 (5)	A5i; A4o	late Pleist.	Zone trends northwest



SCALE

25 0 25 50 75 100 MILES

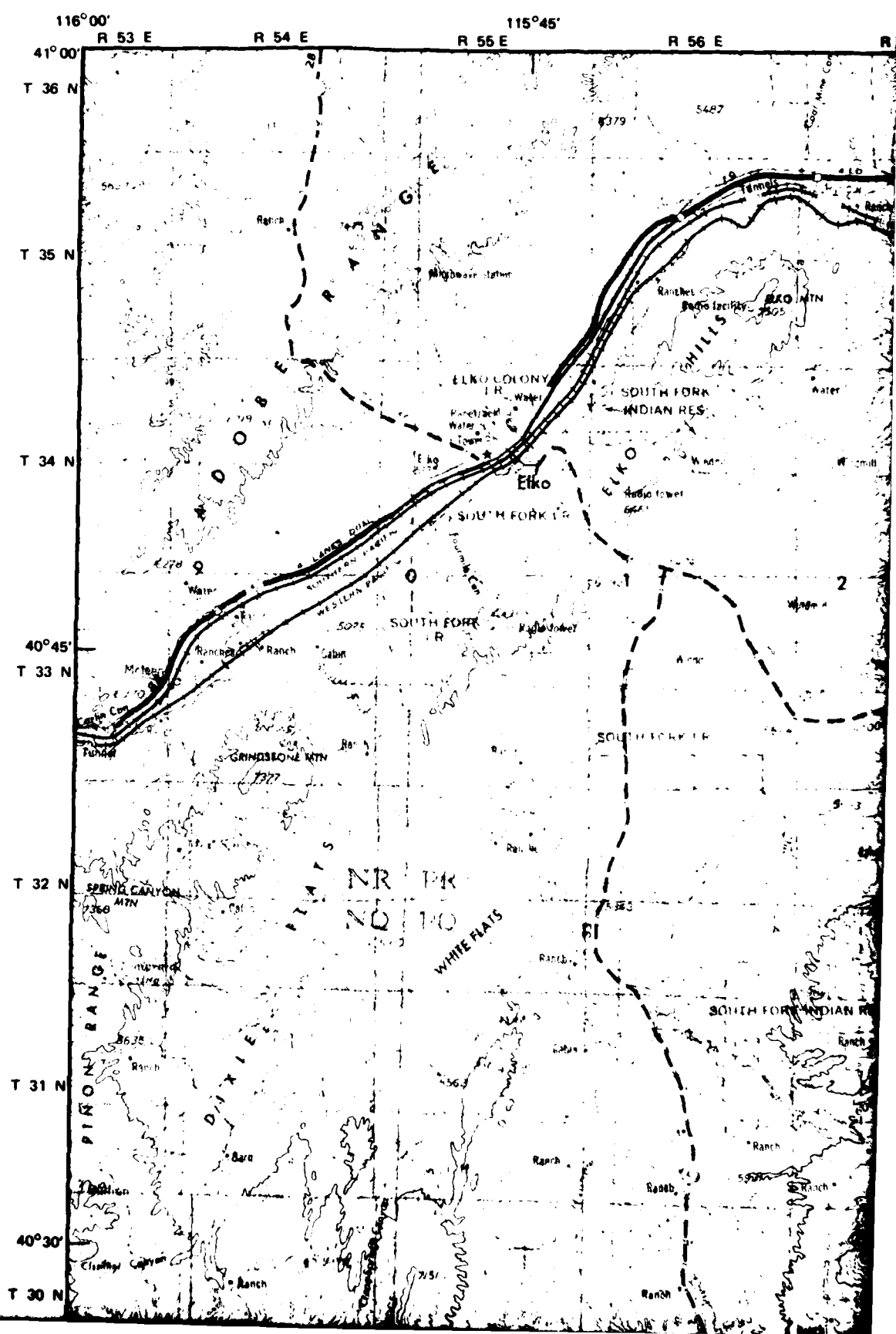
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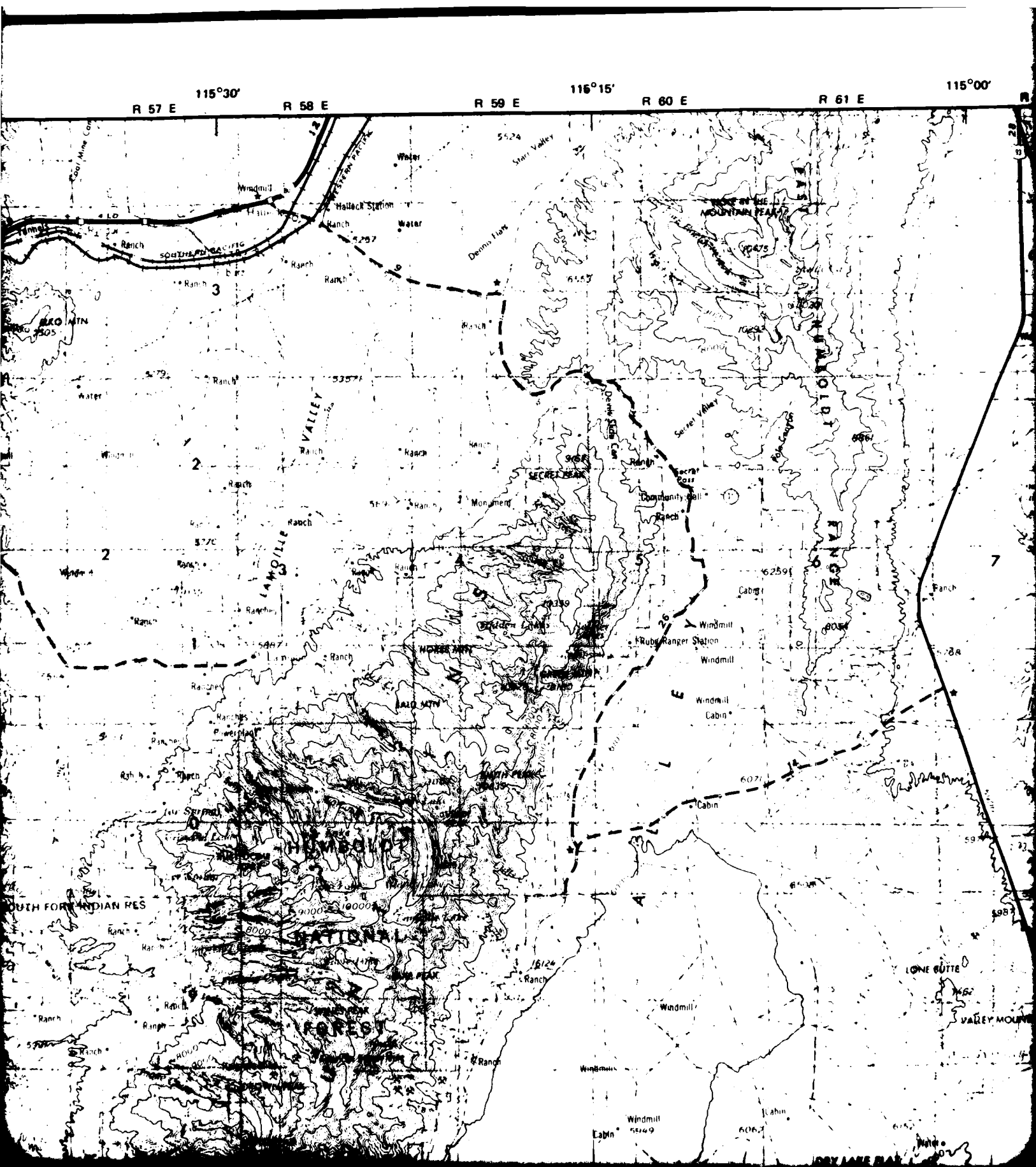
**Ertec**  
The Earth Technology Corporation

MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX

INDEX MAP OF 1° X 2°  
QUADRANGLES, PLATES A1 - A11

FIGURE A1





115°00'

R 62 E

R 63 E

114°45'

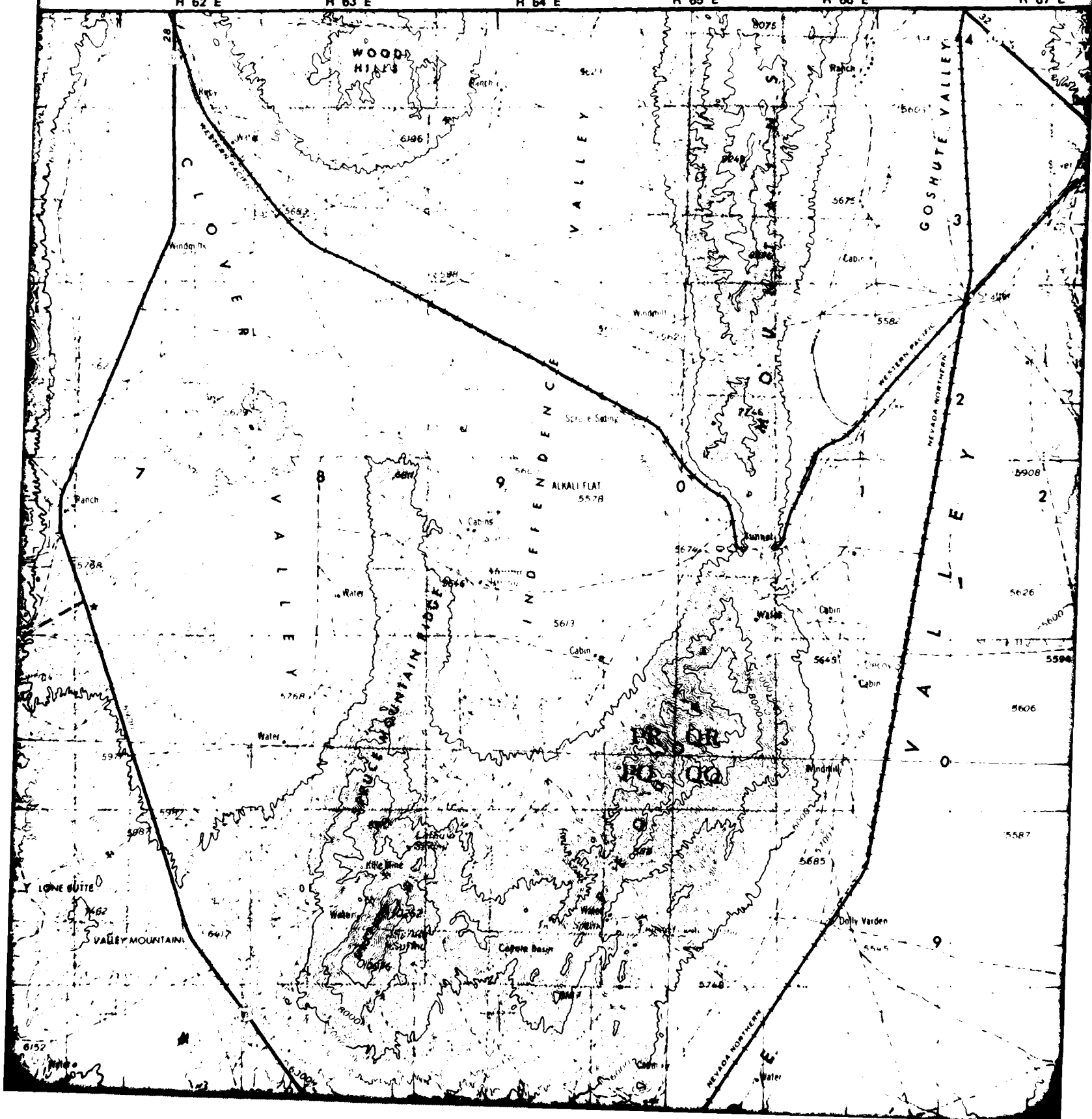
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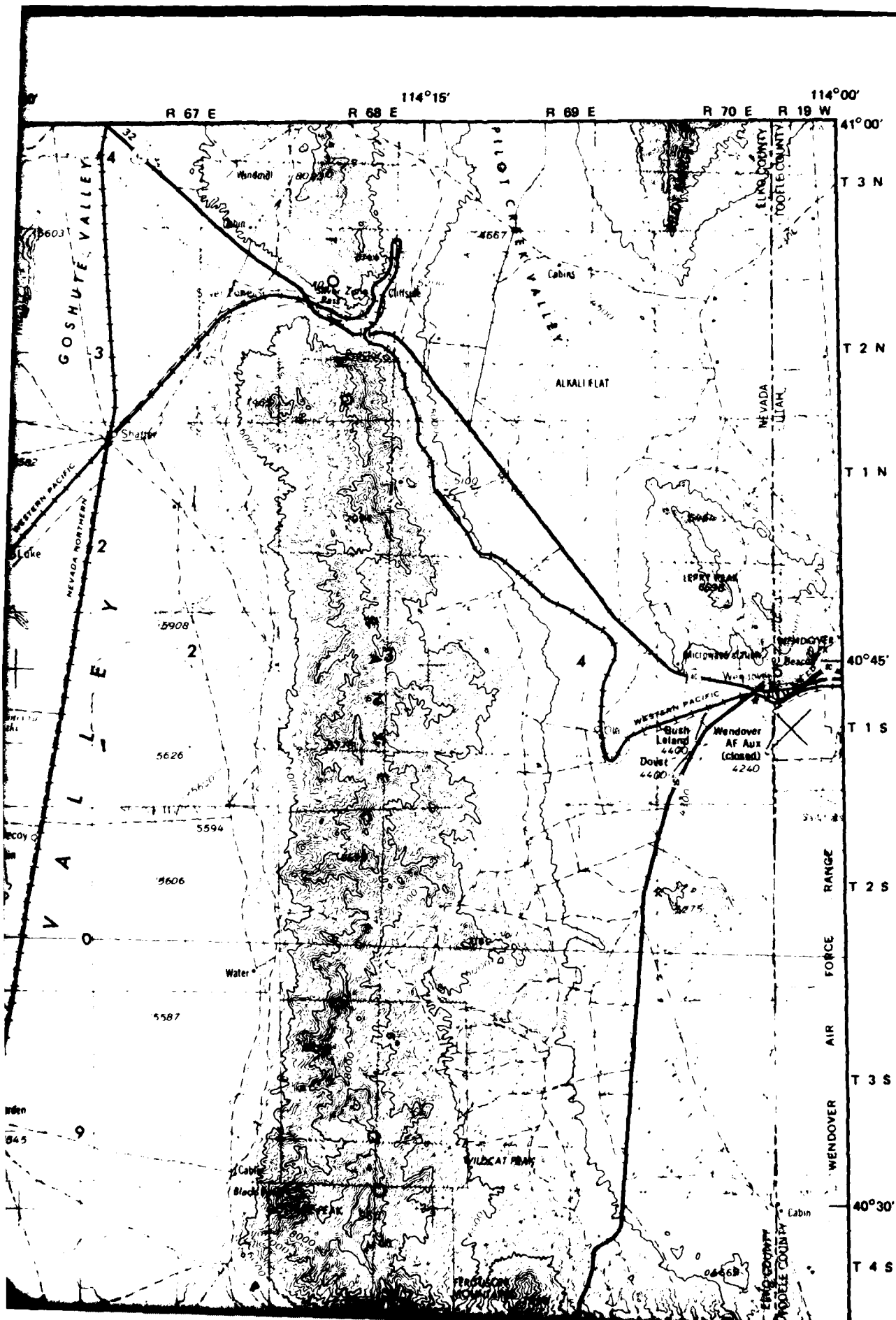
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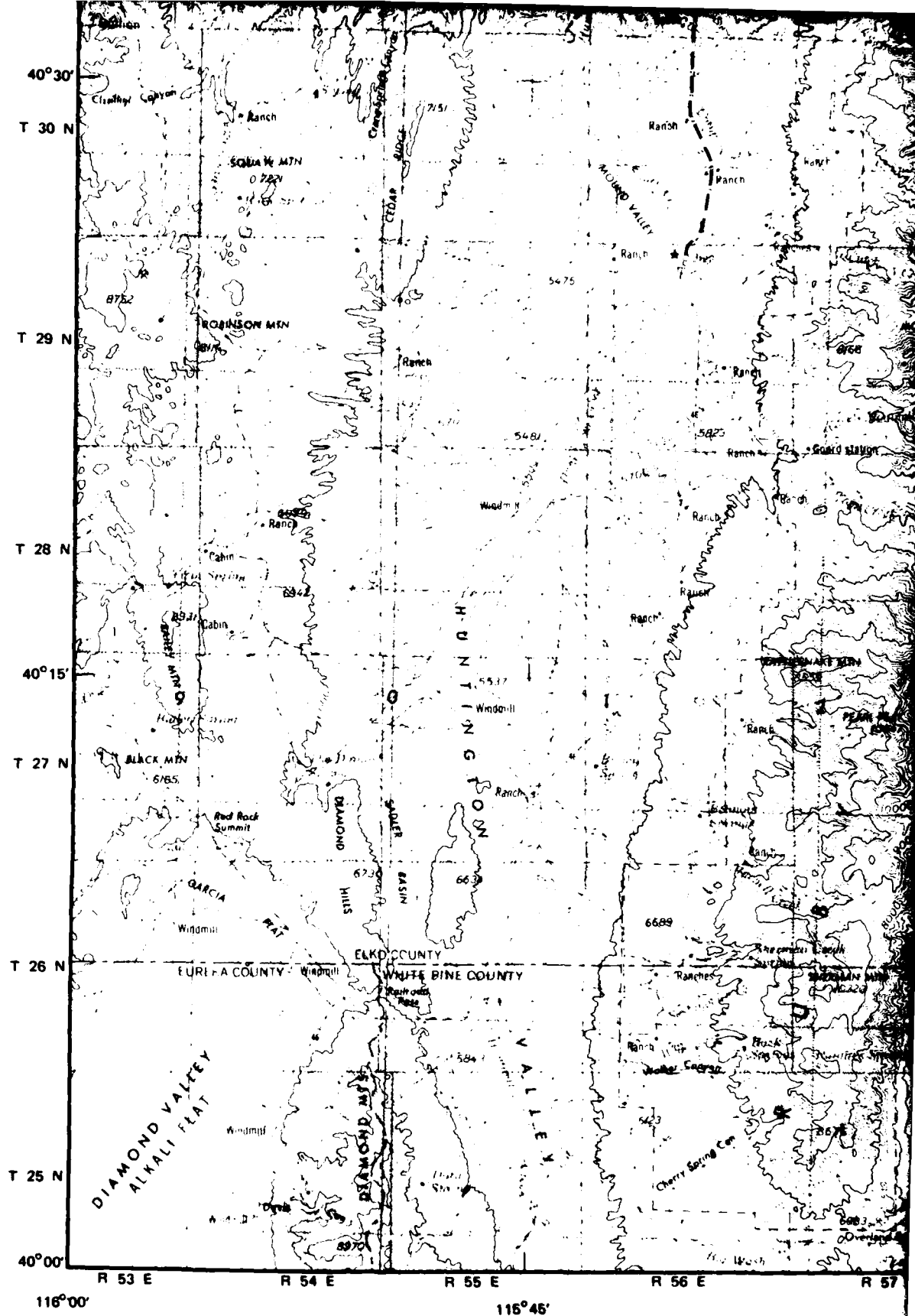
114°30'

R 66 E

R 67 E







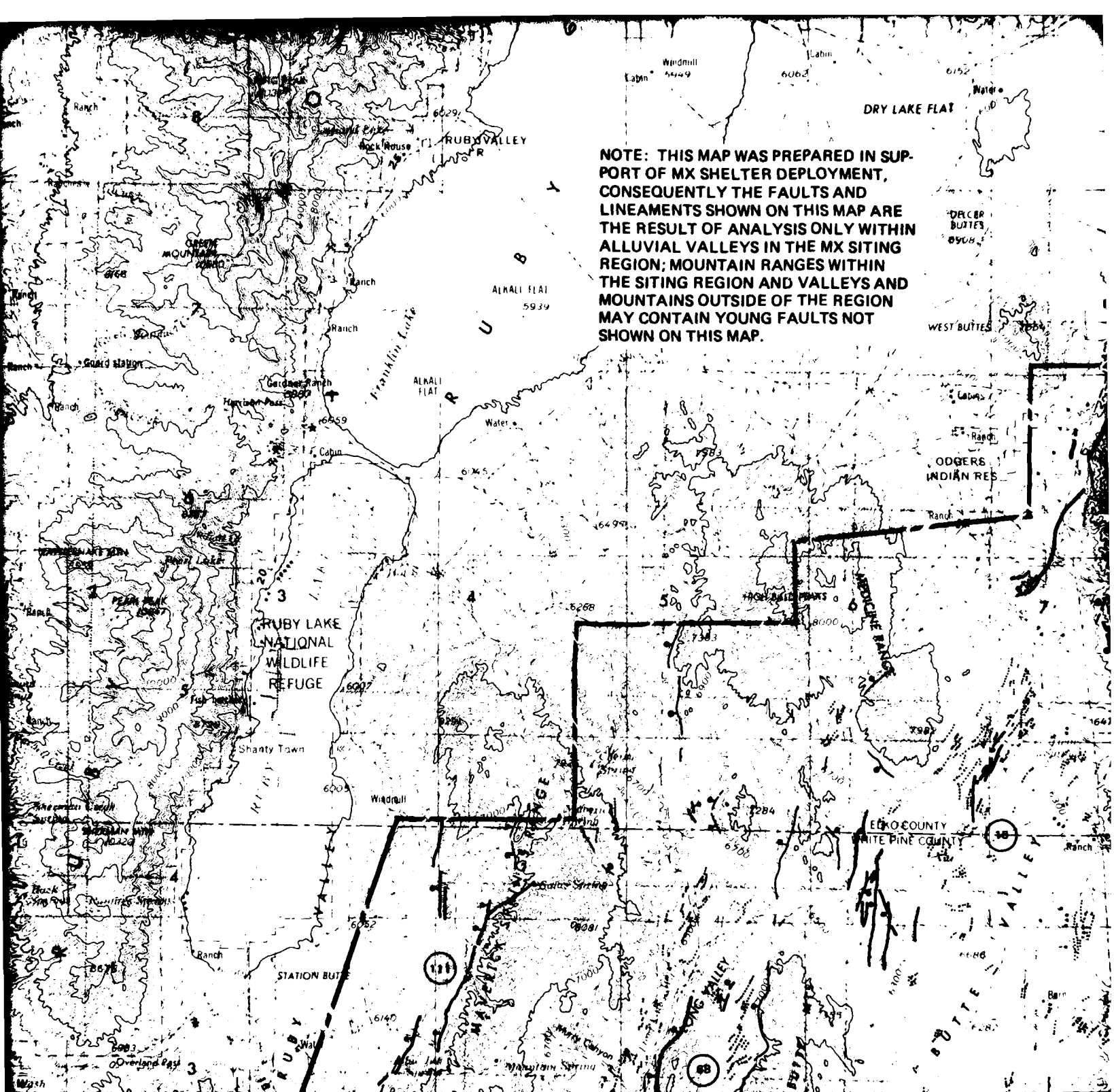
## EXPLANATION



**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp and portions of scarp are removed by erosion; dashed line indicates trace inferred between most scarps and (or) presence of lineaments between the scarps. Age of most recent movement

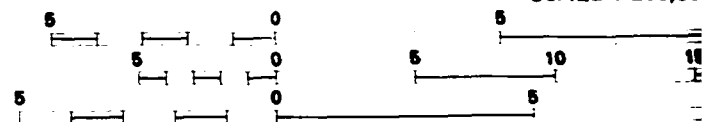
Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).

NOTE: THIS MAP WAS PREPARED IN SUPPORT OF MX SHELTER DEPLOYMENT, CONSEQUENTLY THE FAULTS AND LINEAMENTS SHOWN ON THIS MAP ARE THE RESULT OF ANALYSIS ONLY WITHIN ALLUVIAL VALLEYS IN THE MX SITING REGION; MOUNTAIN RANGES WITHIN THE SITING REGION AND VALLEYS AND MOUNTAINS OUTSIDE OF THE REGION MAY CONTAIN YOUNG FAULTS NOT SHOWN ON THIS MAP.



R 57 E 115°30' R 58 E R 59 E 115°15' R 60 E R 61 E 115°00'

SCALE 1:250,000



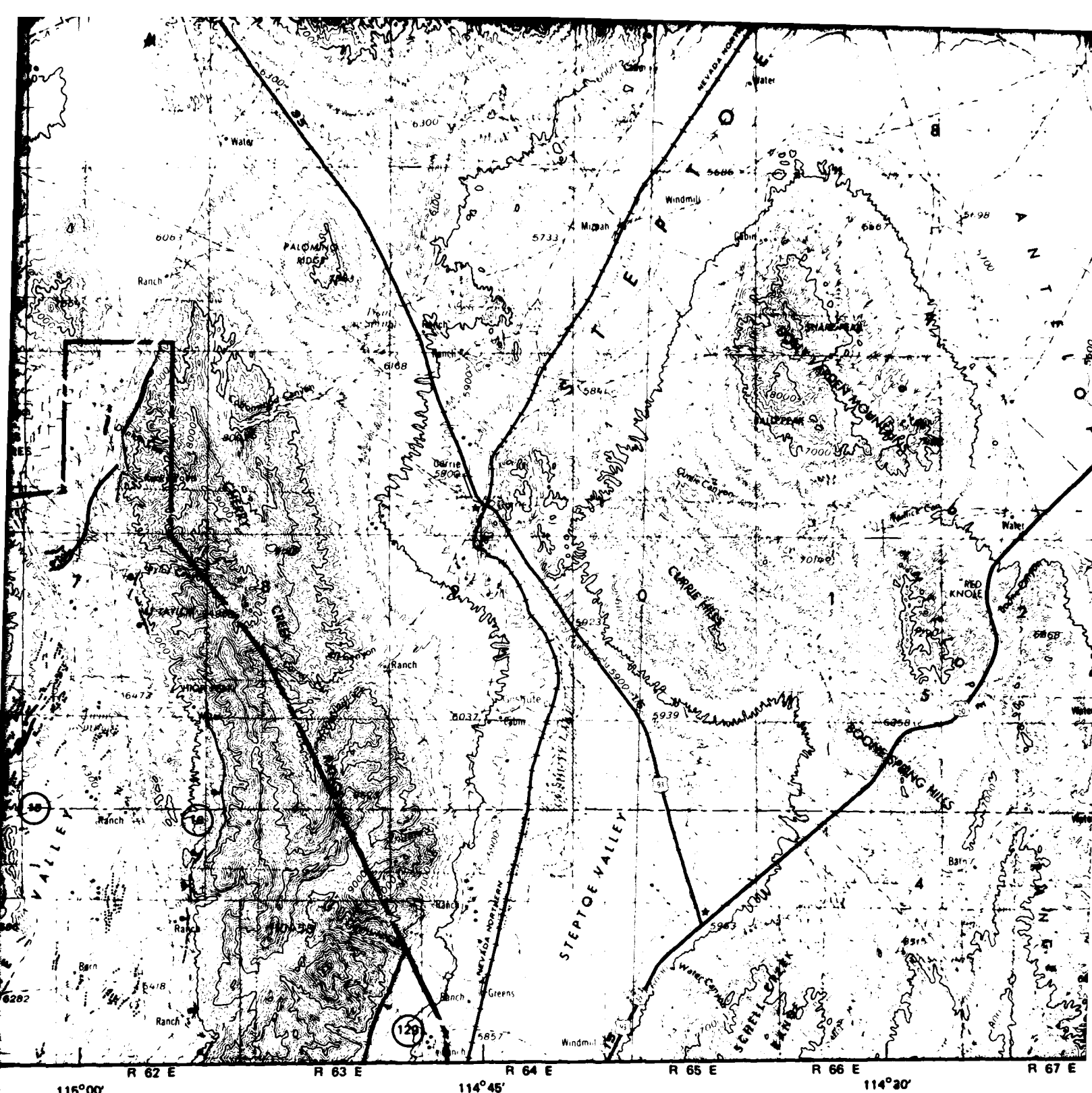
ION

continuous fault scarp except for narrow drainage crossing where small inferred between more widely spaced scarps based on alignment of recent movement denoted by line width.

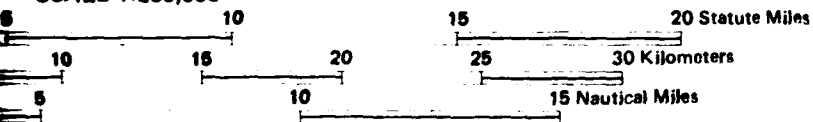
(≤15,000 years).

CONTOUR INTERVAL 20  
WITH SUPPLEMENTARY CONTOURS AT  
Base from U.S. Geological Survey, Elko Qu  
1:250,000, Transverse Mercator





SCALE 1:250,000

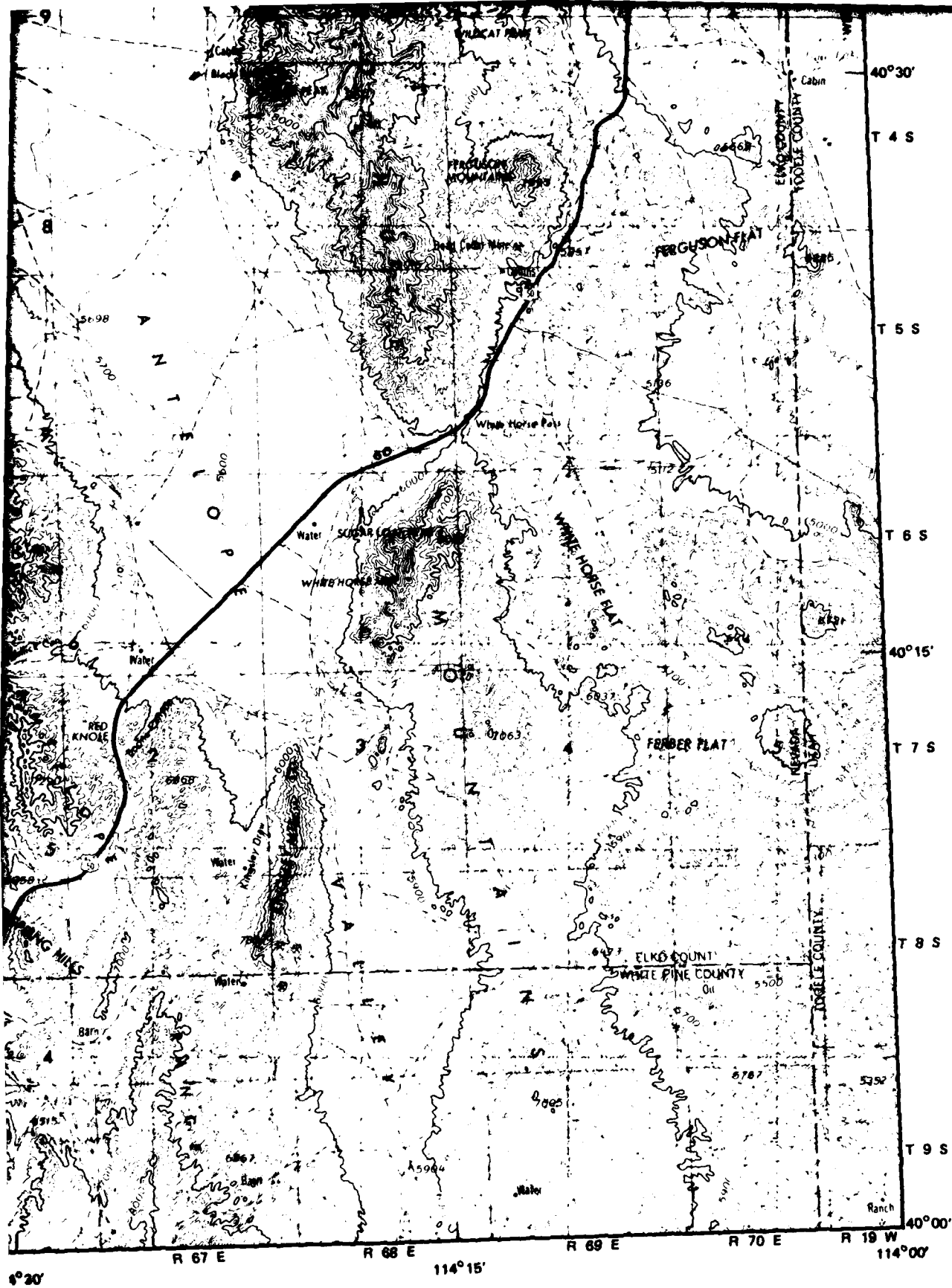


LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES

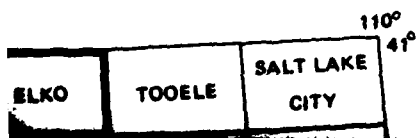
OUR INTERVAL 200 FEET  
RY CONTOURS AT 100 FOOT INTERVALS  
ical Survey, Elko Quadrangle, Revised 1970,  
, Transverse Mercator Projection

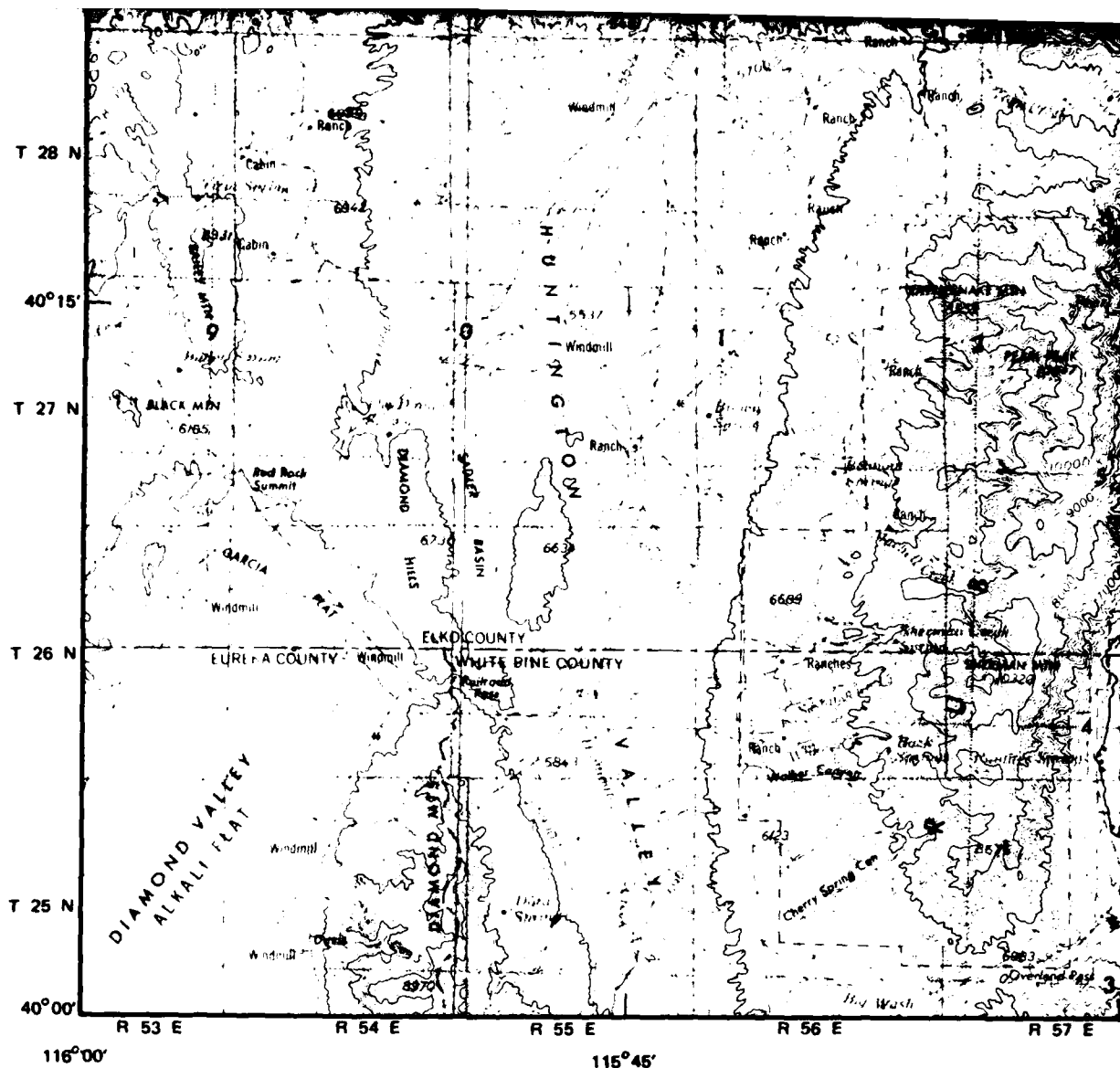
LOVELOCK	WINNEMUCCA	ELKO	TOOELE	SALT CI
RENO	MILLETT	ELY	DELTA	M
WALKER LAKE	TONOPAH	LUND	RICHFIELD	9

NEVADA  
UTAH



F U.S. GEOLOGICAL SURVEY  
JADRANGLES





## EXPLANATION



**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp except portions of scarp are removed by erosion; dashed line indicates trace inferred between more widely spaced scarps and (or) presence of lineaments between the scarps. Age of most recent movement denoted by line style.



Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).



Pleistocene ( $\approx 15,000$  years to 1.8 million years).



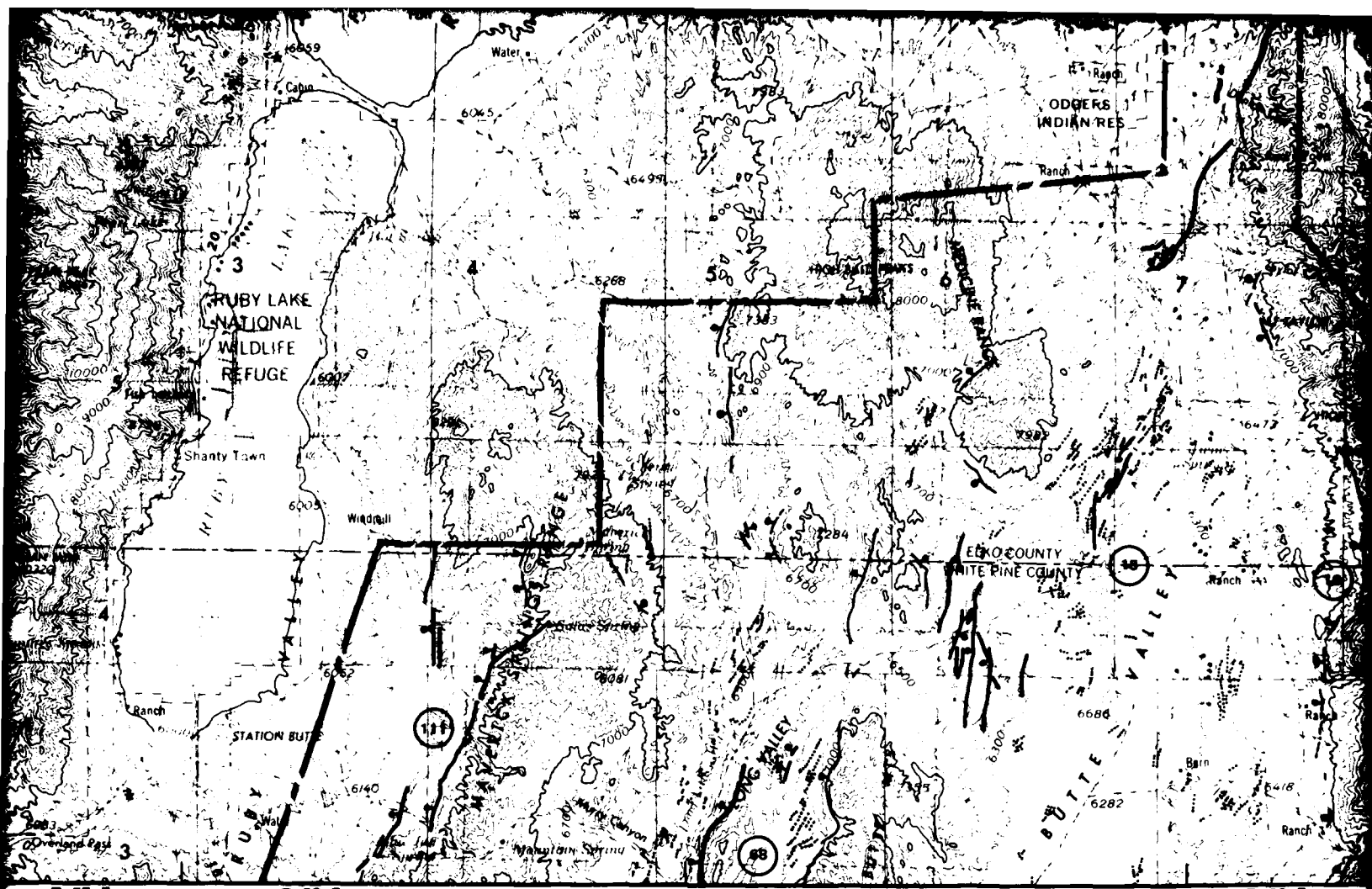
Indeterminate; late Tertiary or younger, probably Quaternary. Scarps are present but lack of young stratigraphic units over trace of fault.



**LINEAMENT:** Vegetation alignments and tonal contrasts without topographic relief; believed to be faults.



**APPROXIMATE BOUNDARY OF FAULT-STUDY REGION**



115°30'

R 58 E

R 59 E

115°15'

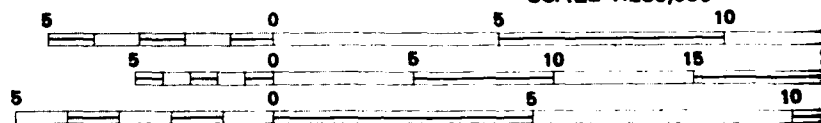
R 60 E

R 61 E

115°00'

R 62 E

SCALE 1:250,000



at scarp except for narrow drainage crossing where small  
between more widely spaced scarps based on alignment of  
movement denoted by line width.

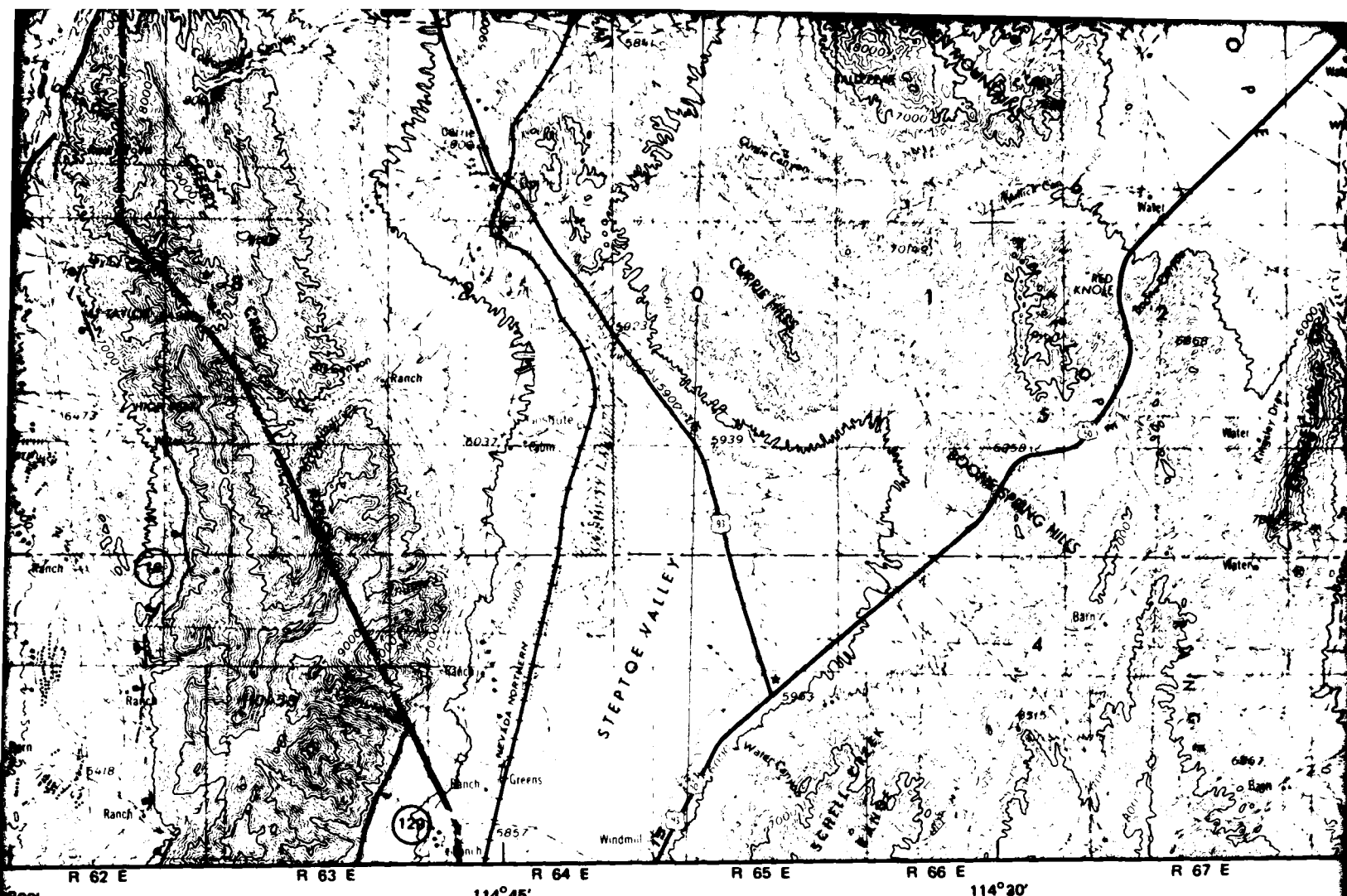
years).

CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT  
Base from U.S. Geological Survey, Elko Quadrangle, R  
1:250,000, Transverse Mercator Projection

Scarps are prominent but age cannot be determined due to

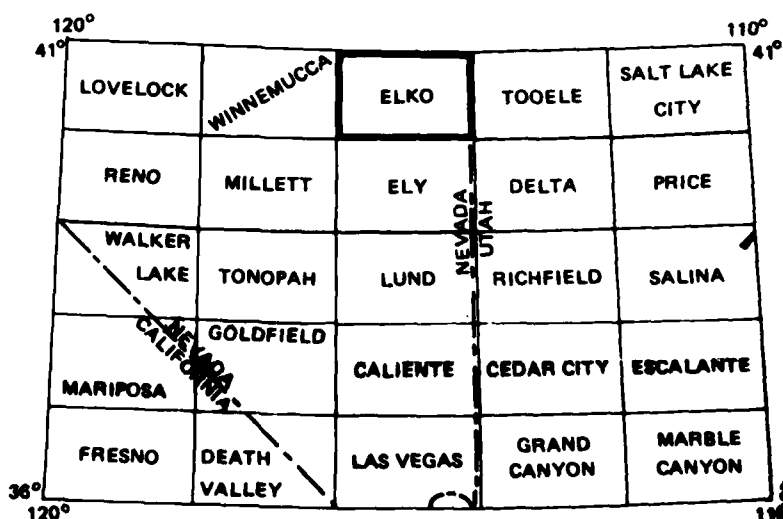
Ref; believed to be faults or fault-related cracks.

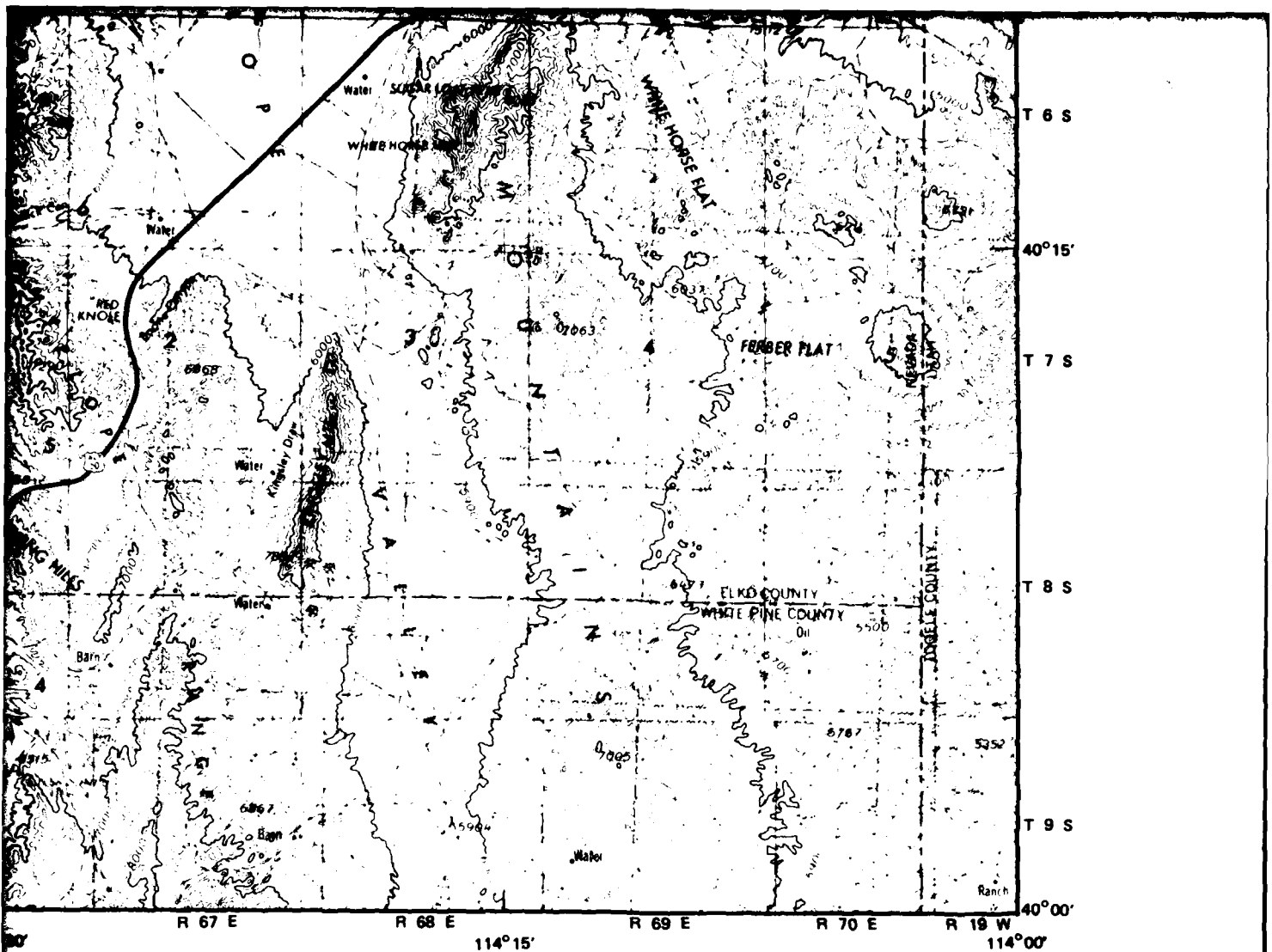




INTERVAL 200 FEET  
 CURVES AT 100 FOOT INTERVALS  
 Elko Quadrangle, Revised 1970,  
 Mercator Projection

LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
 1° x 2° QUADRANGLES





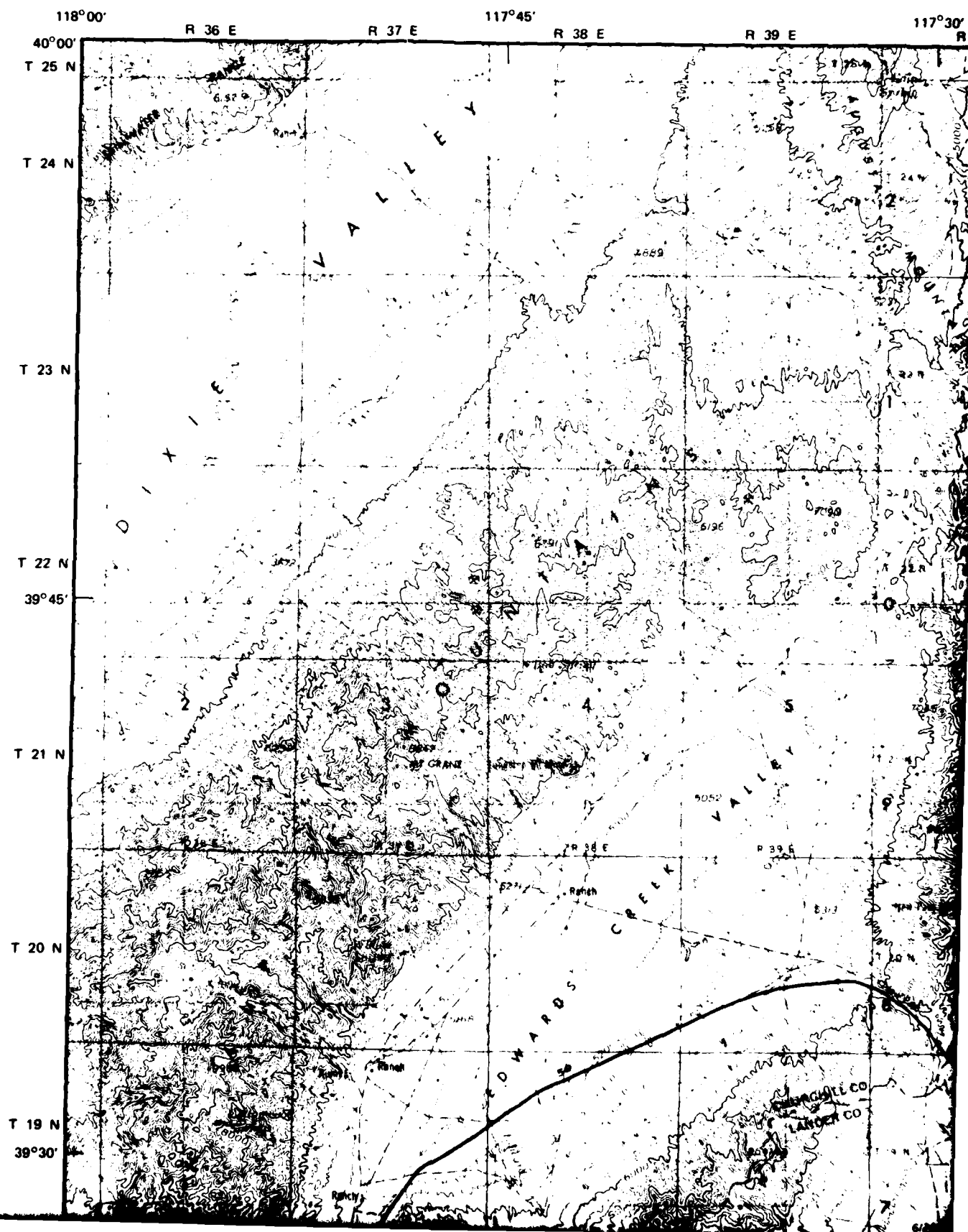
U.S. GEOLOGICAL SURVEY  
QUADRANGLES

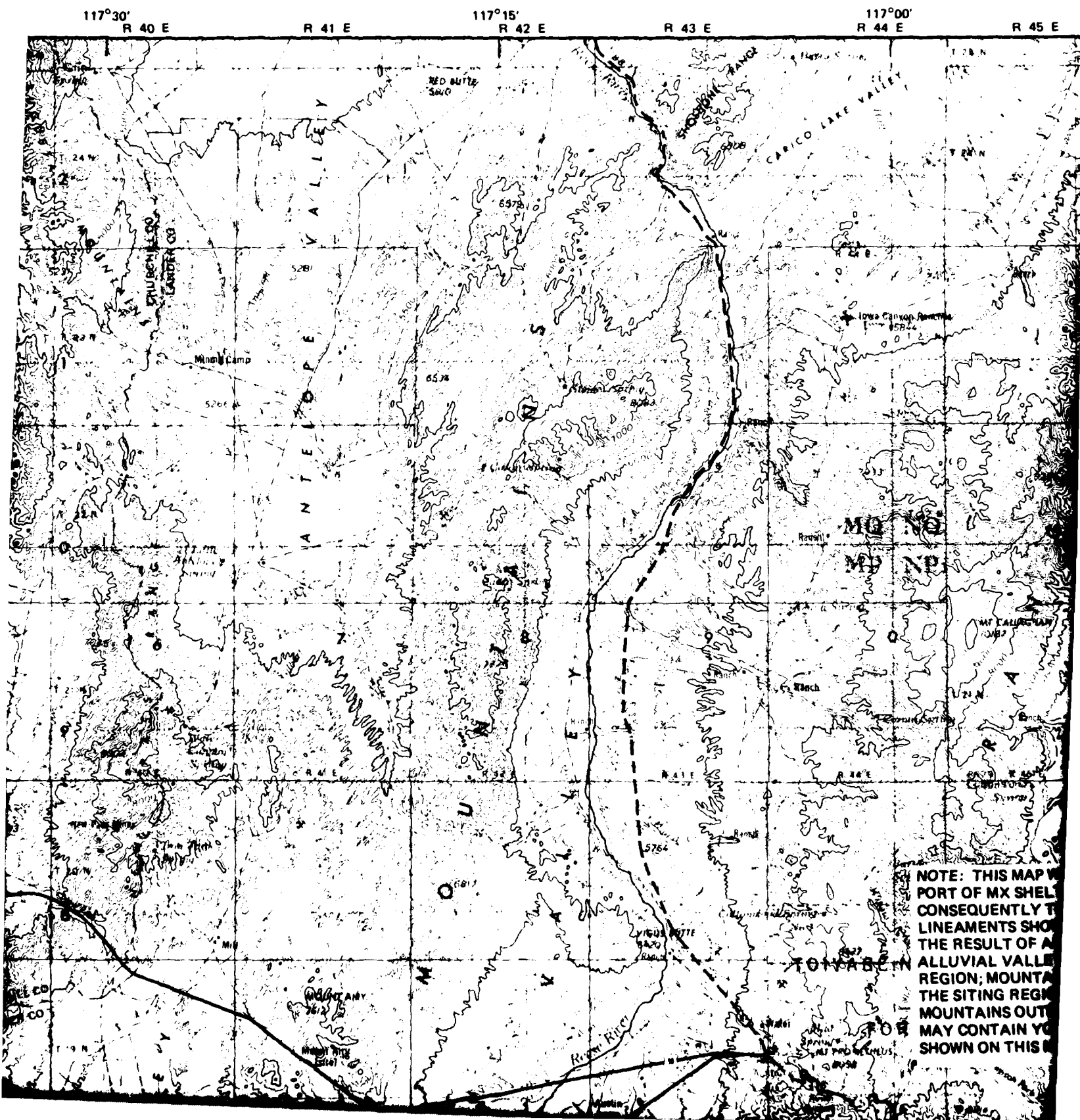
ELKO	TOOELE	SALT LAKE CITY
ELY	DELTA	PRICE
SPRINGFIELD	RICHFIELD	SALINA
WENDOVER	CEDAR CITY	ESCALANTE
VEGAS	GRAND CANYON	MARBLE CANYON

**Ertec**  
The Earth Technology Corporation

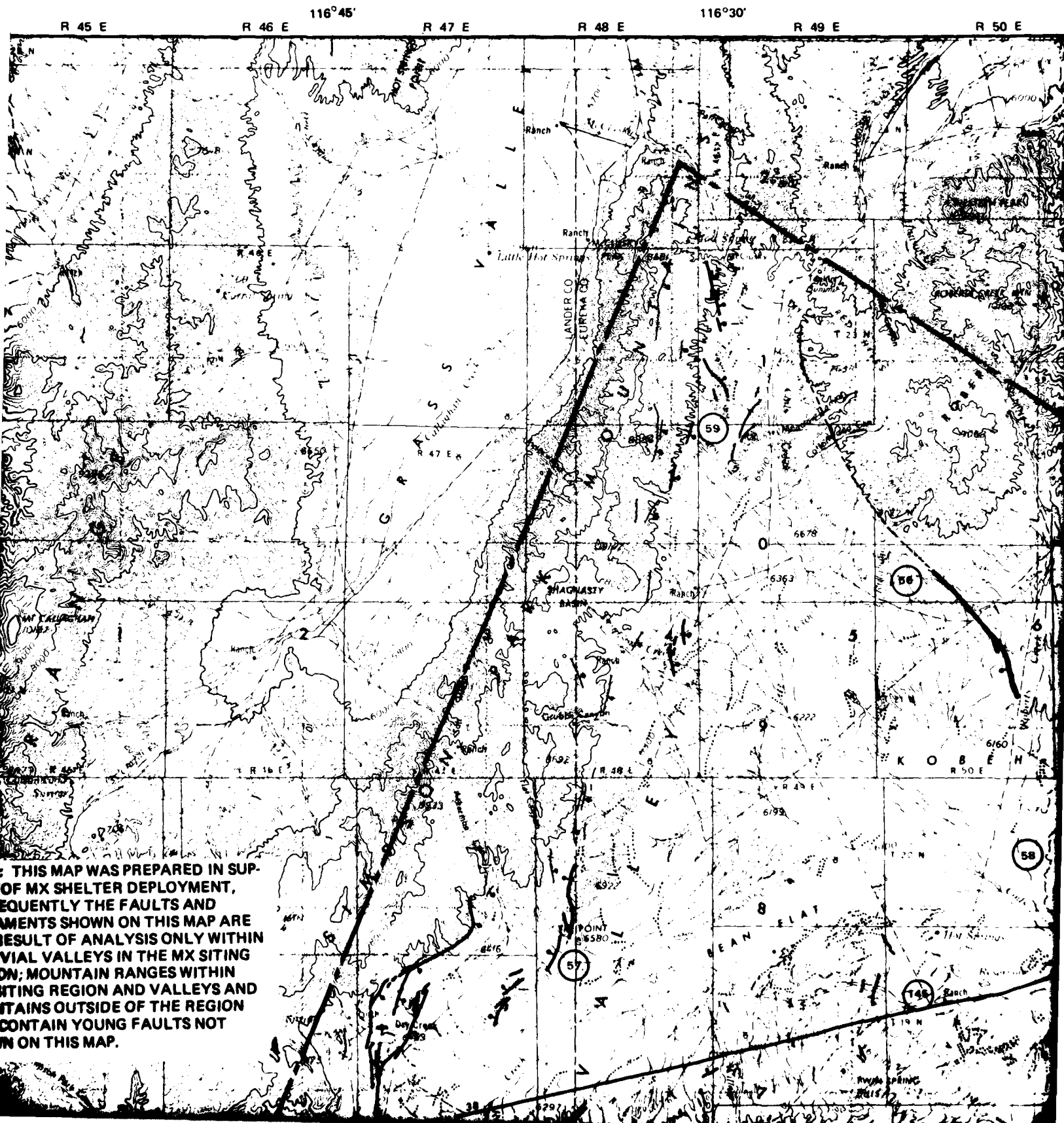
MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX

**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEAMENTS, MX SITING REGION  
ELKO 1° x 2° QUADRANGLE. NEVADA  
PLATE A1**

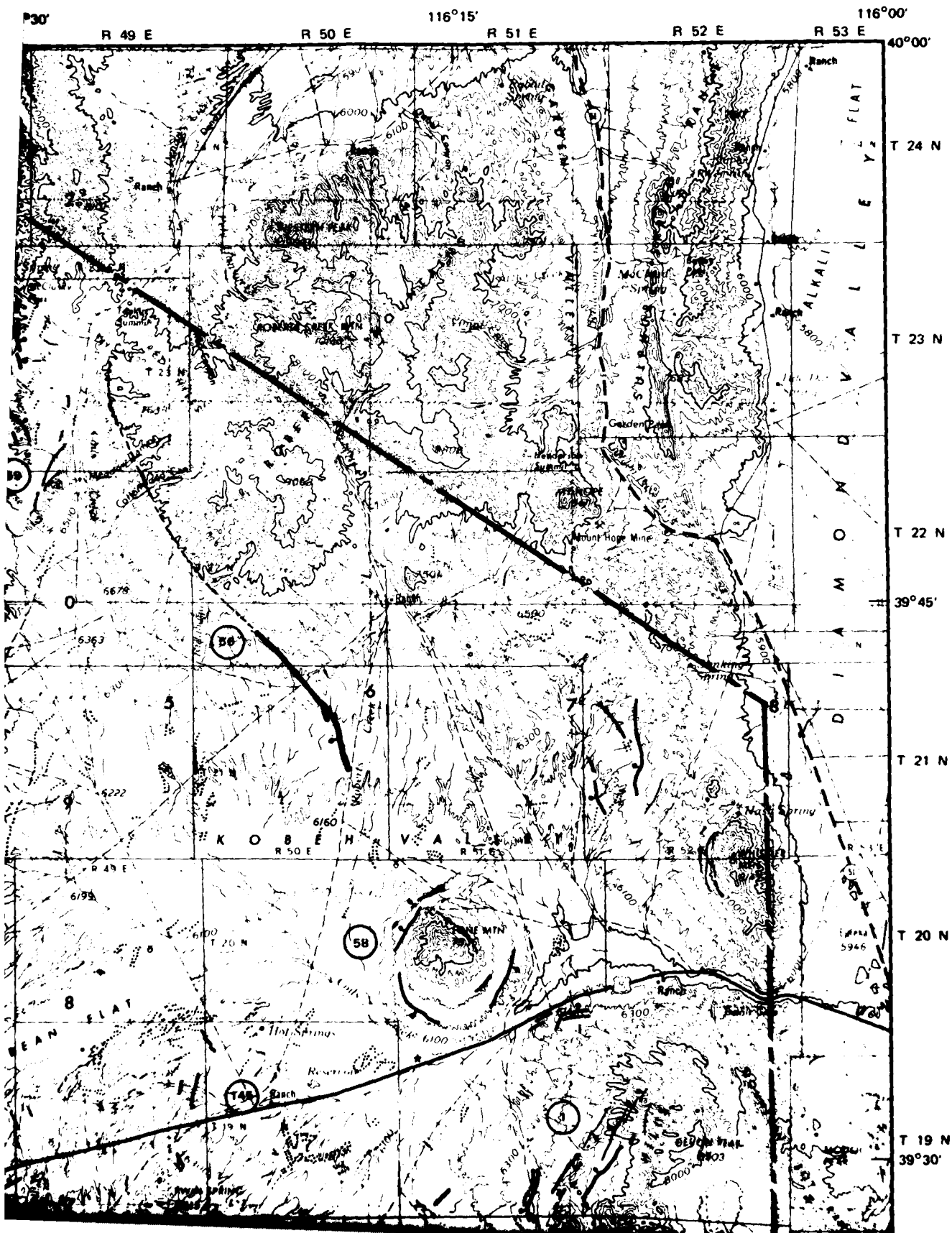








THIS MAP WAS PREPARED IN SUP-  
 OF MX SHELTER DEPLOYMENT,  
 EQUENTLY THE FAULTS AND  
 MENTS SHOWN ON THIS MAP ARE  
 RESULT OF ANALYSIS ONLY WITHIN  
 VIAL VALLEYS IN THE MX SITING  
 ON; MOUNTAIN RANGES WITHIN  
 SITING REGION AND VALLEYS AND  
 TAINS OUTSIDE OF THE REGION  
 CONTAIN YOUNG FAULTS NOT  
 ON THIS MAP.



T 19 N

39°30'

T 18 N

T 17 N

39°15'

T 16 N

T 15 N

T 14 N

T 13 N

39°00'

R 36 E

R 37 E

R 38 E

R 39 E

118°00'

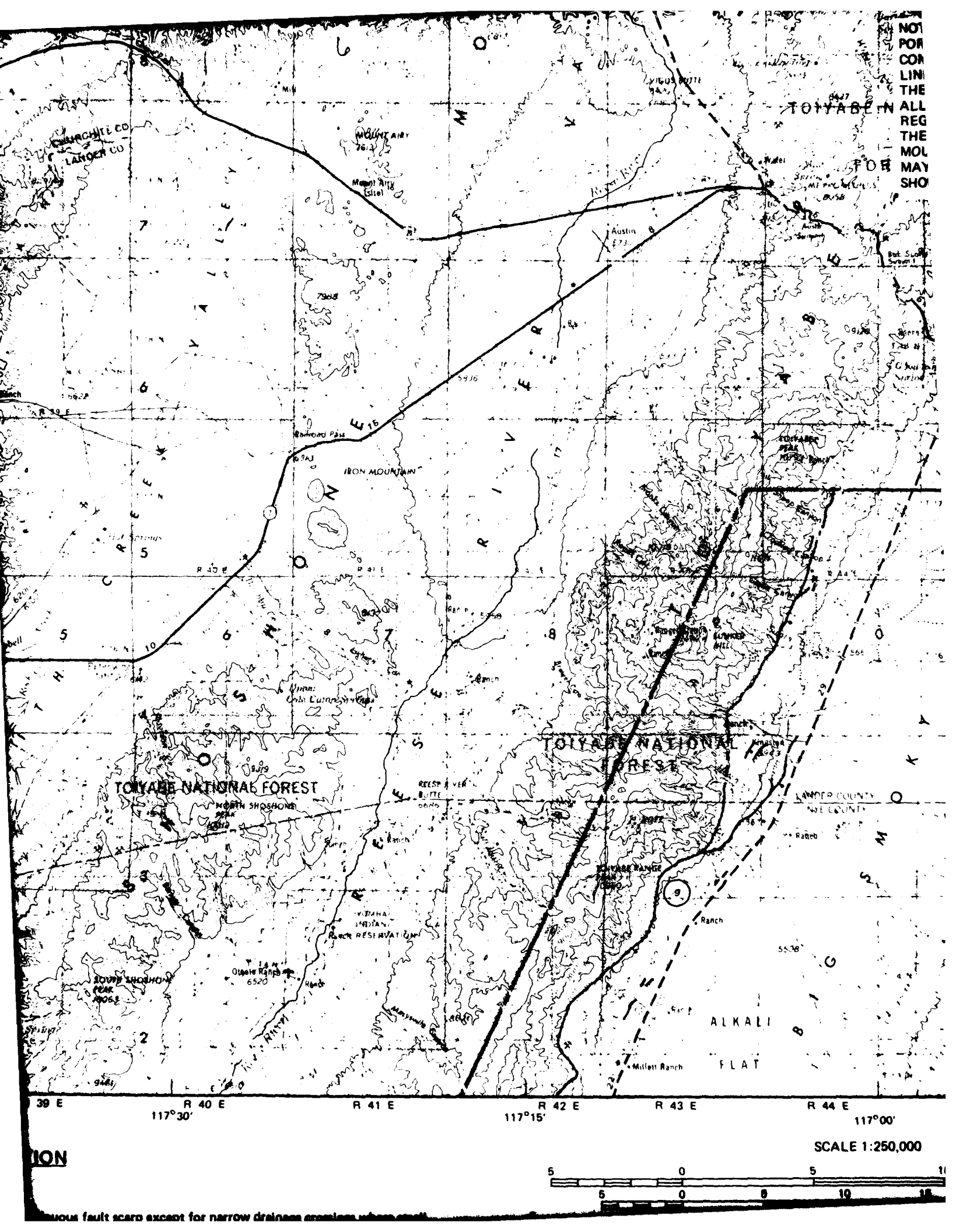
117°45'

**EXPLANATION**

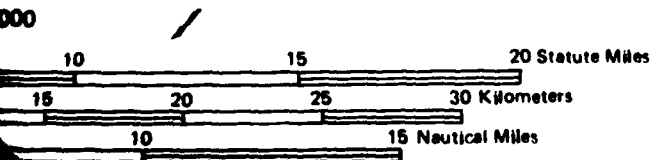
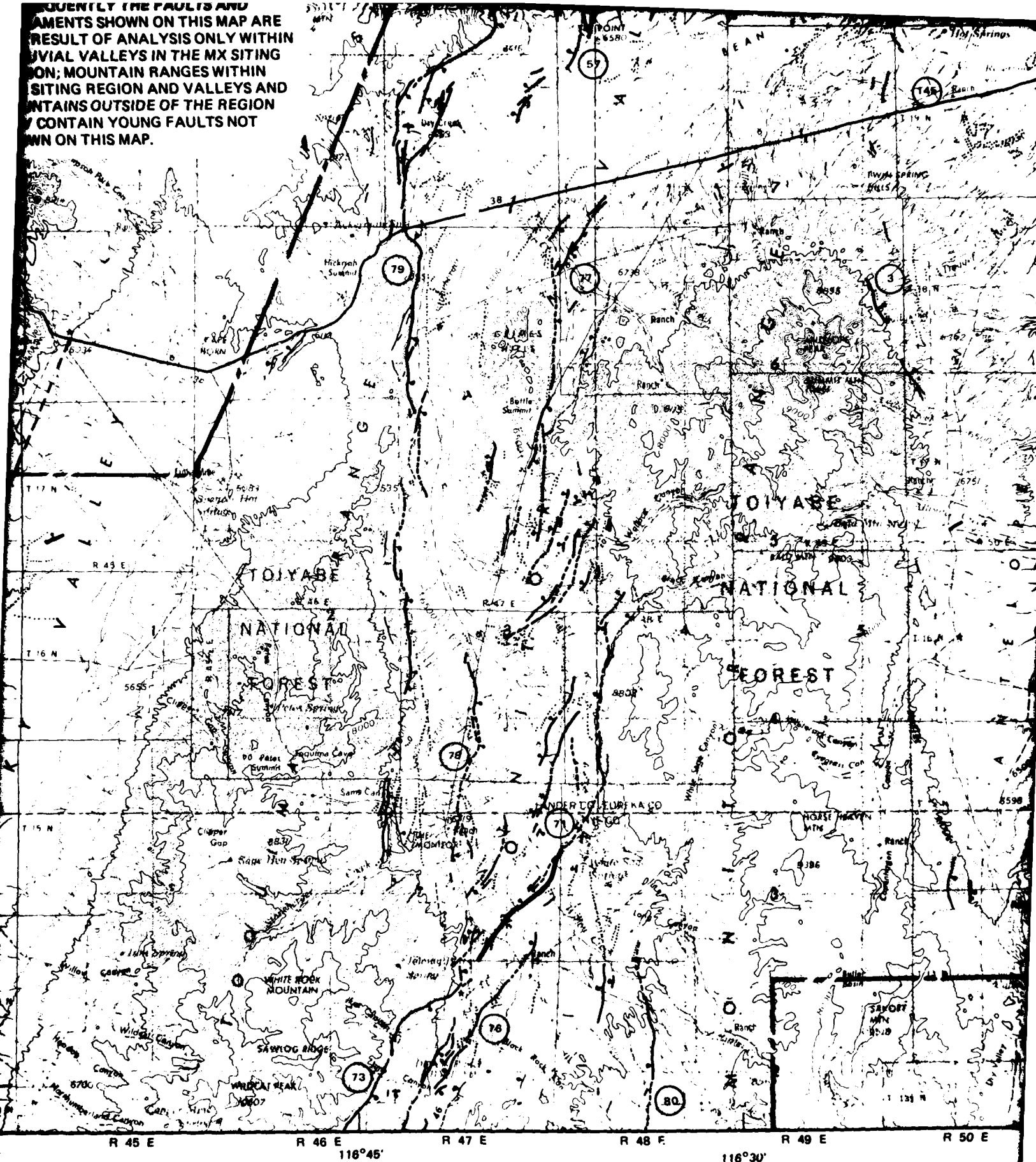
**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp and portions of scarp are removed by erosion; dashed line indicates trace inferred between major scarps and (or) presence of lineaments between the scarps. Age of most recent movement (



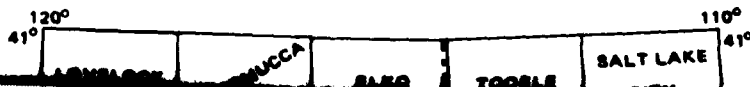
Post Ronneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years)

[illegible][illegible][illegible]

FREQUENTLY THE FAULTS AND  
 ELEMENTS SHOWN ON THIS MAP ARE  
 RESULT OF ANALYSIS ONLY WITHIN  
 UVAL VALLEYS IN THE MX SITING  
 REGION; MOUNTAIN RANGES WITHIN  
 SITING REGION AND VALLEYS AND  
 CONTAINS OUTSIDE OF THE REGION  
 CONTAIN YOUNG FAULTS NOT  
 SHOWN ON THIS MAP.



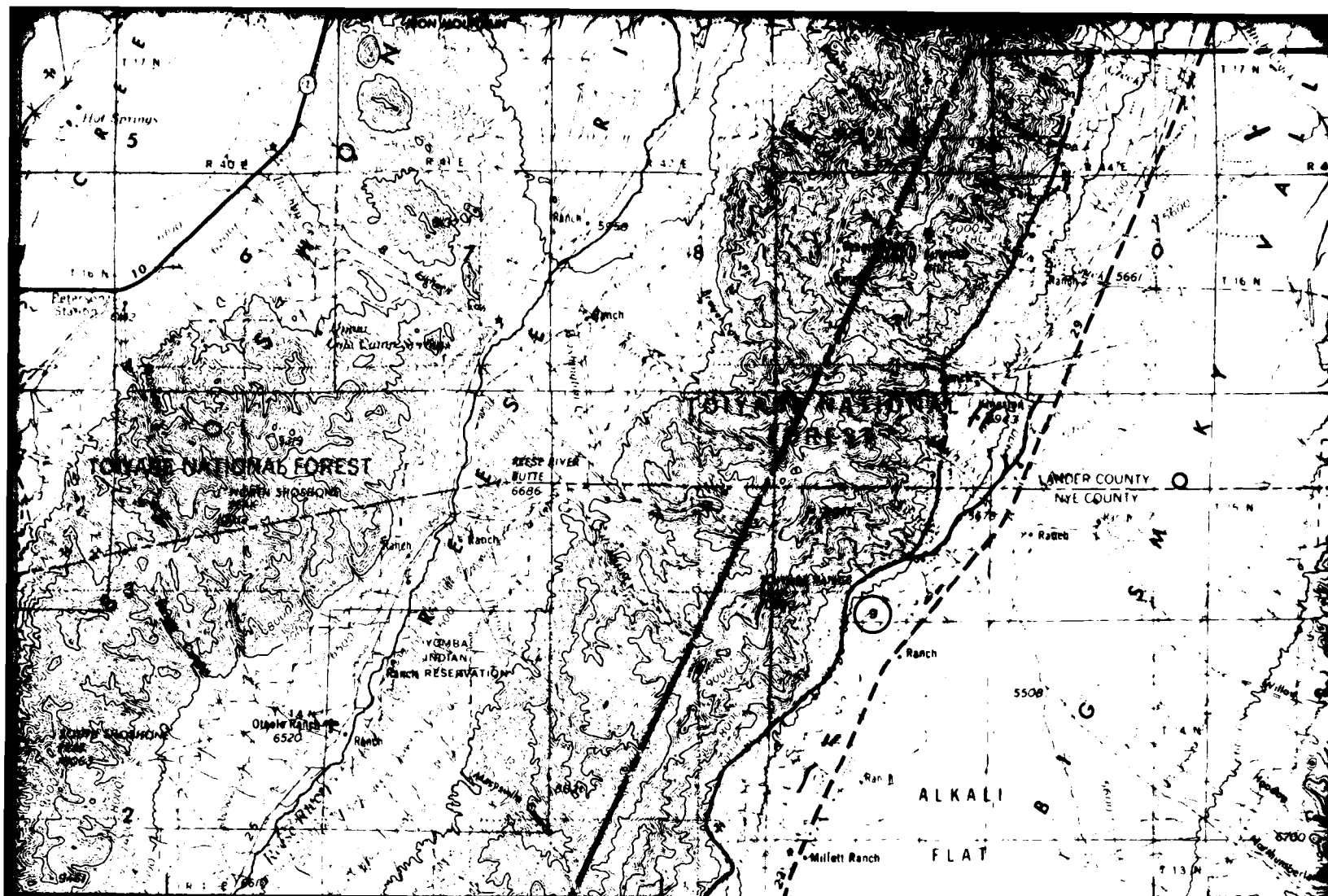
LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
 1° x 2° QUADRANGLES





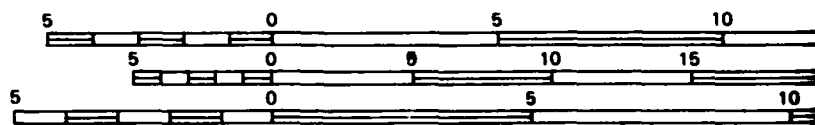






R 40 E R 41 E R 42 E R 43 E R 44 E  
117°30' 117°15' 117°00'

SCALE 1:250,000



CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVAL  
Base from U.S. Geological Survey, Millett Quadrangle, Map  
1:250,000, Transverse Mercator Projection

... fault scarp except for narrow drainage crossings where small  
... between more widely spaced scarps based on alignment of  
... movement denoted by line width.

(15,000 years).

... Scarp are prominent but age cannot be determined due

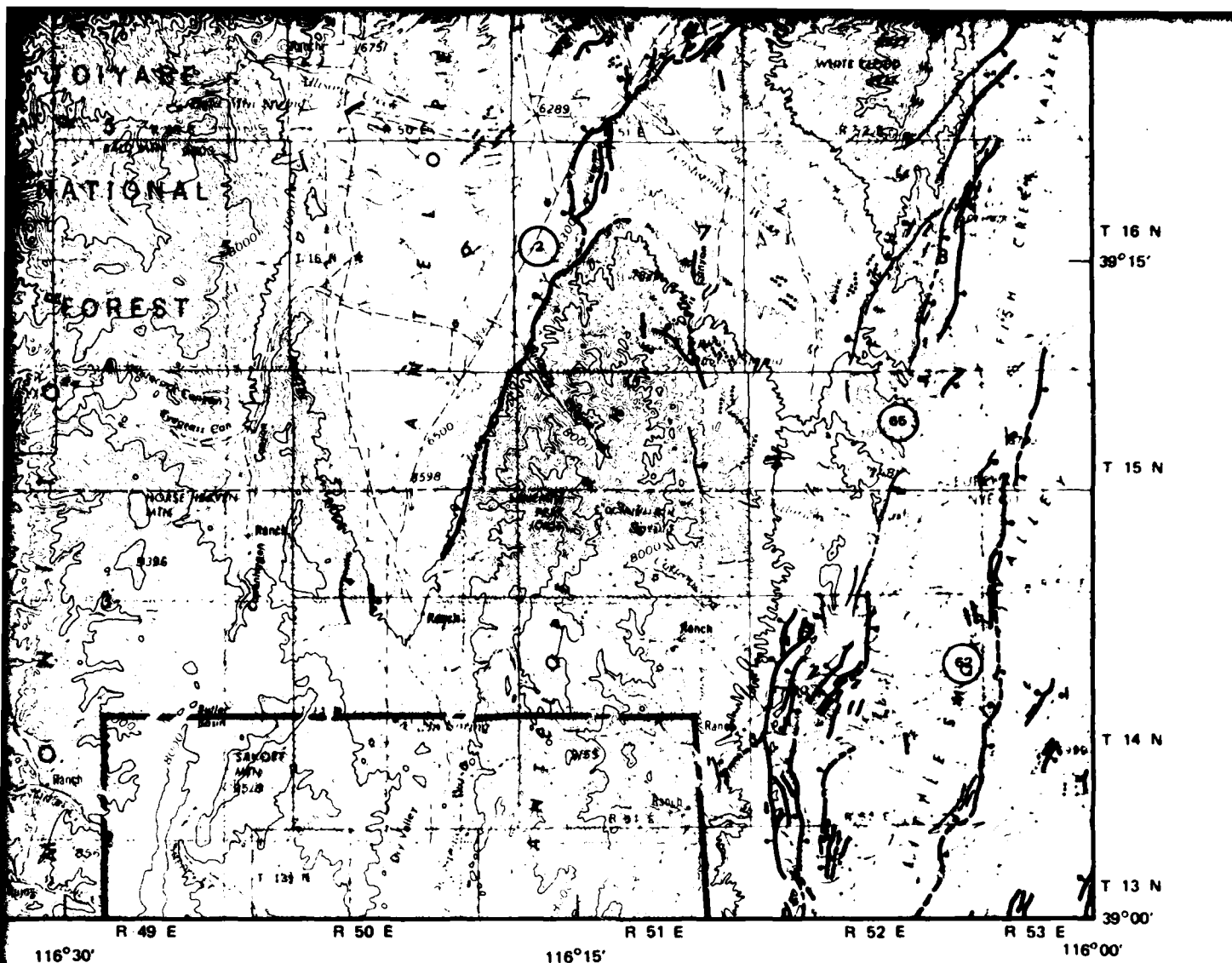
... relief; believed to be faults or fault-related cracks.



NORTH







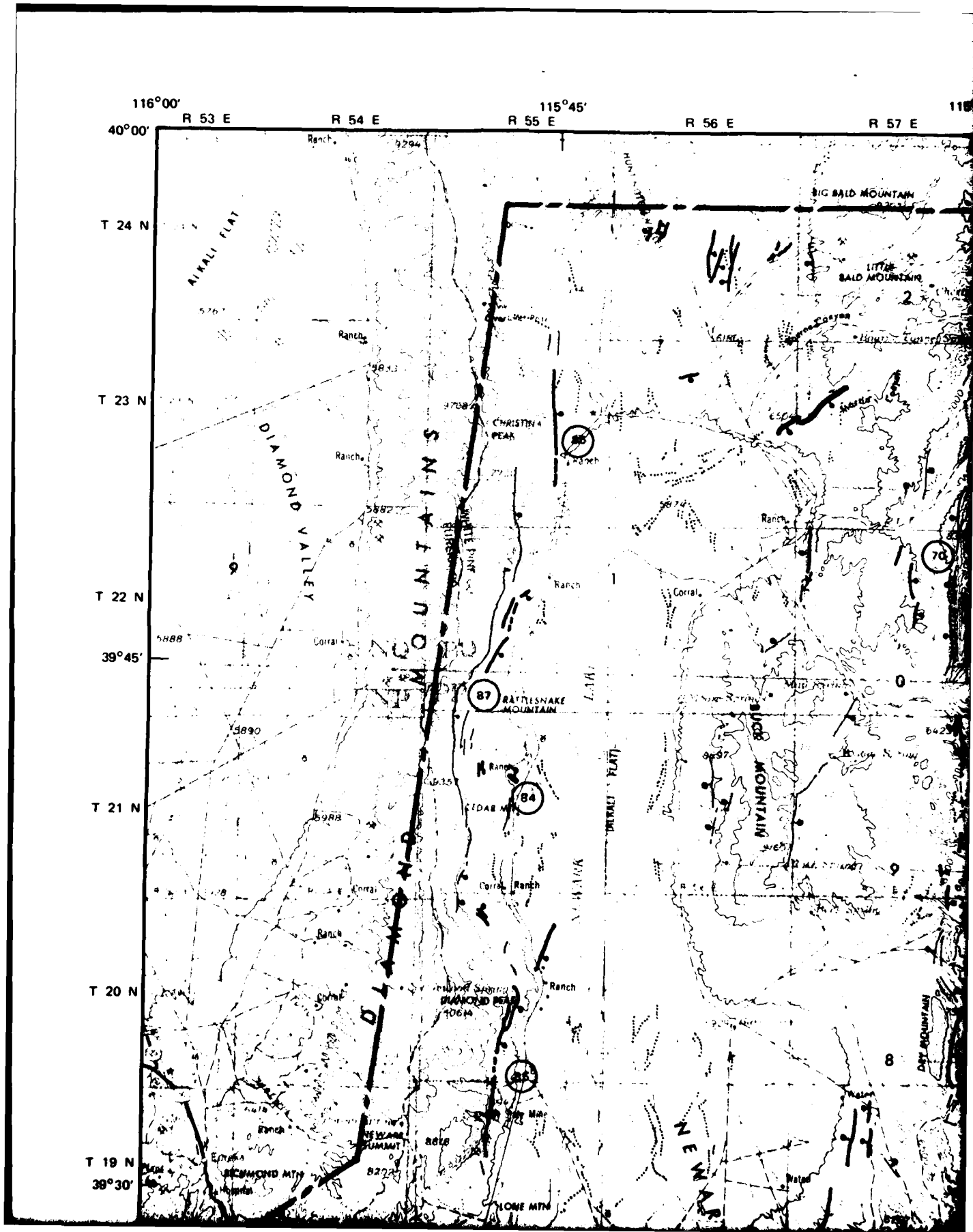
U.S. GEOLOGICAL SURVEY  
QUADRANGLES

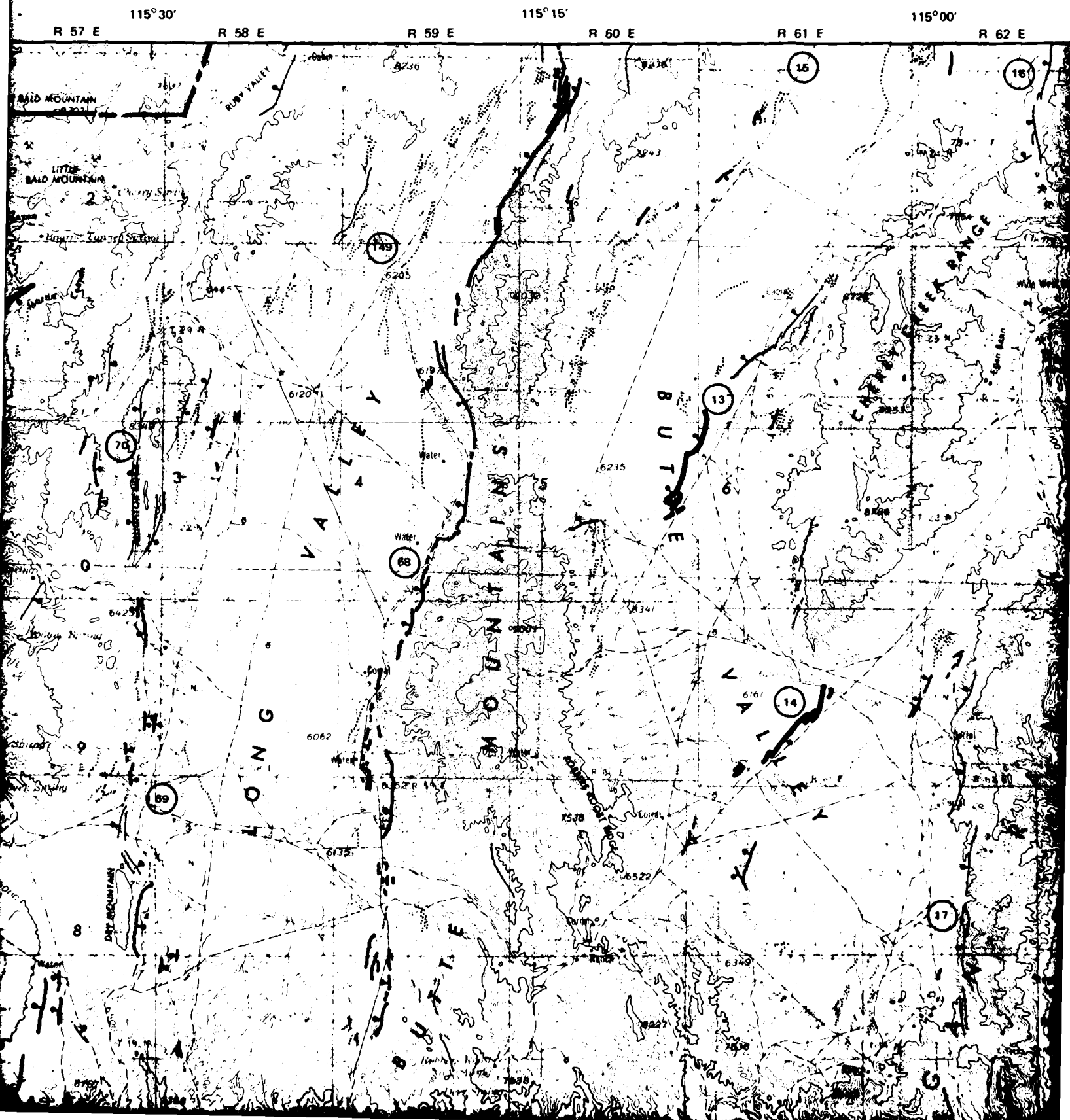
NEVADA	TOOELE	SALT LAKE CITY
	DELTA	PRICE
	RICHFIELD	SALINA
	CEDAR CITY	ESCALANTE
UTAH	GRAND CANYON	MARBLE CANYON

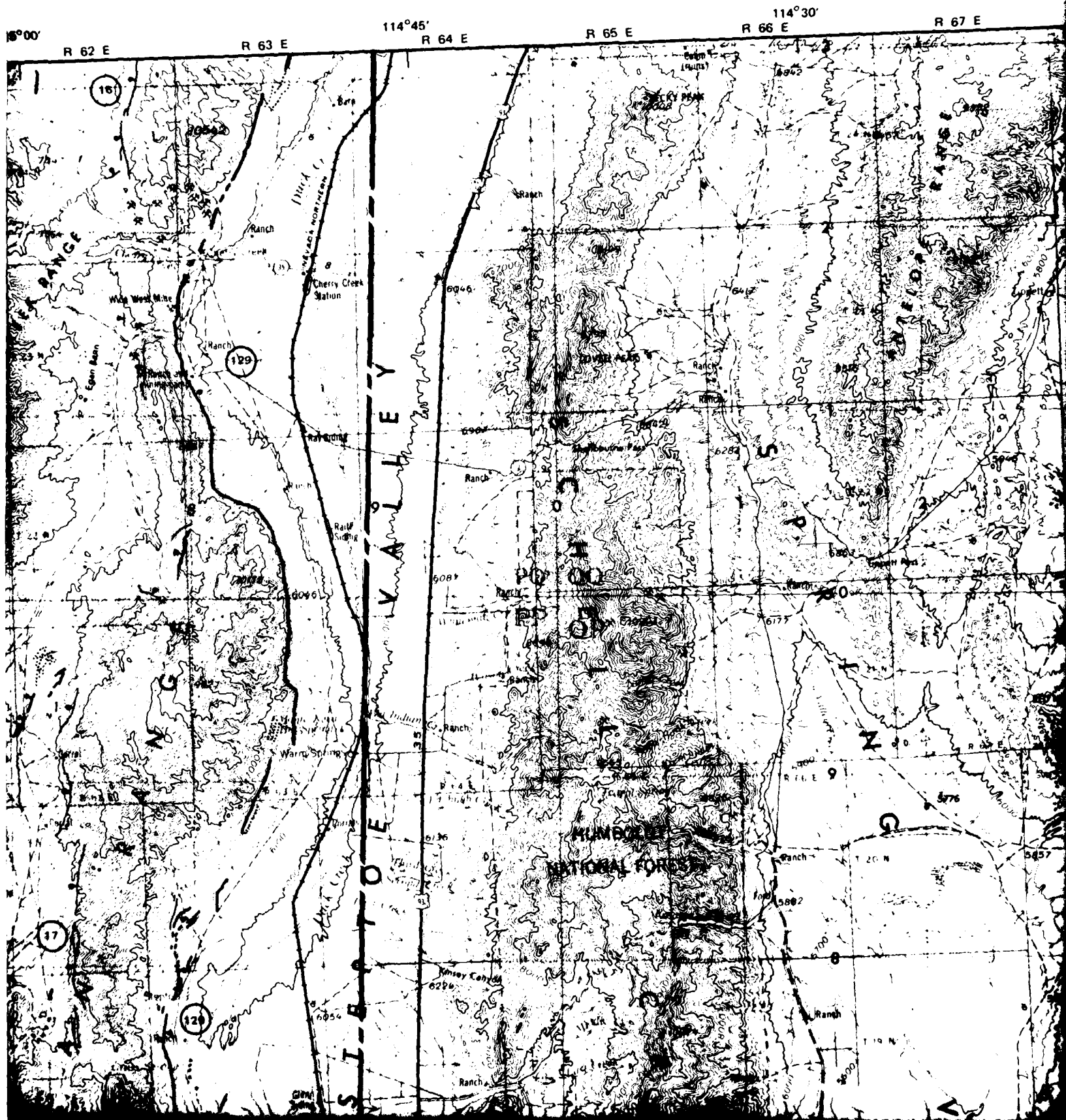
**Ertec**  
The Earth Technology Corporation

MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRCE-MX

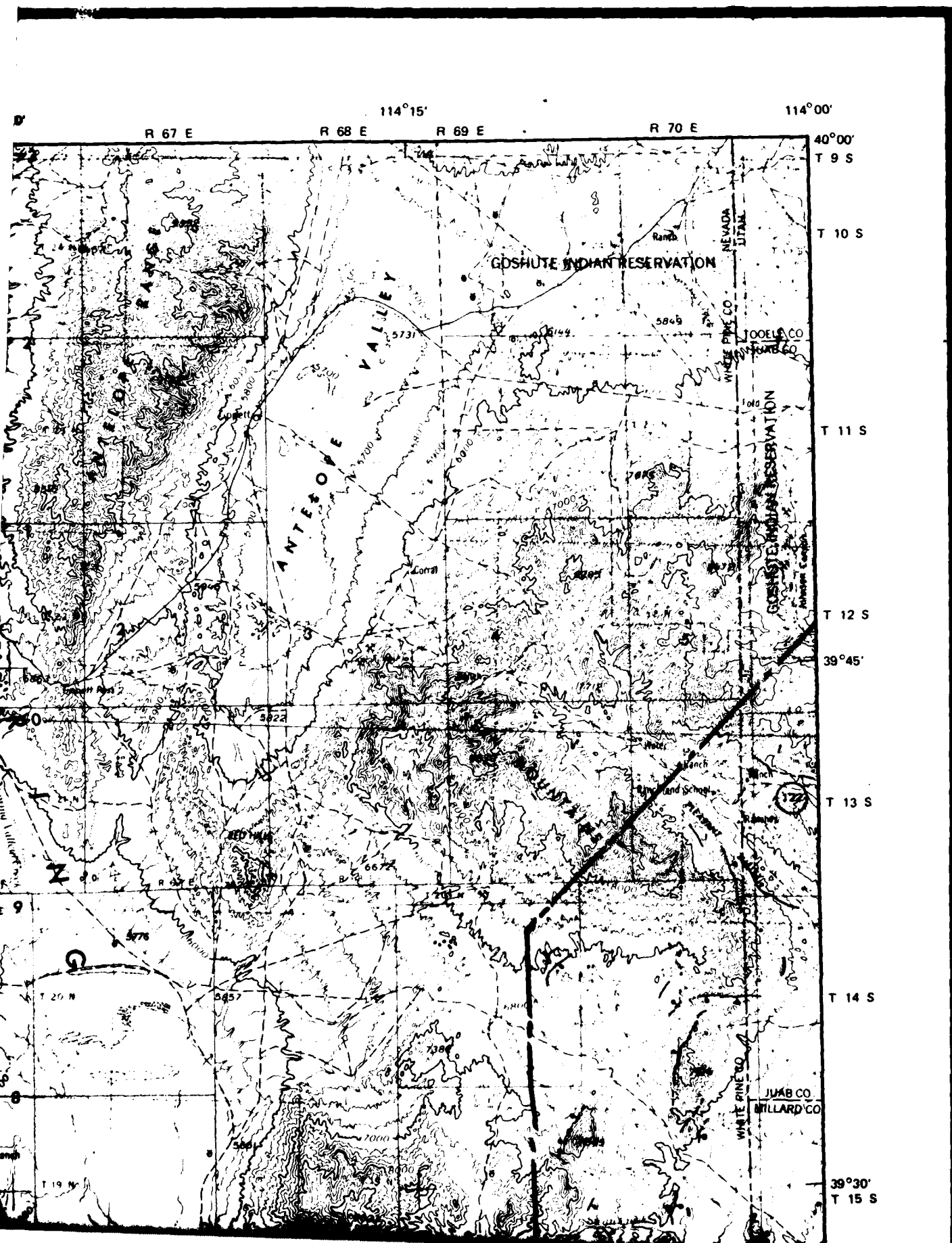
**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEAMENTS, MX SITING REGION  
MILLETT 1° x 2° QUADRANGLE, NEVADA  
PLATE A2**

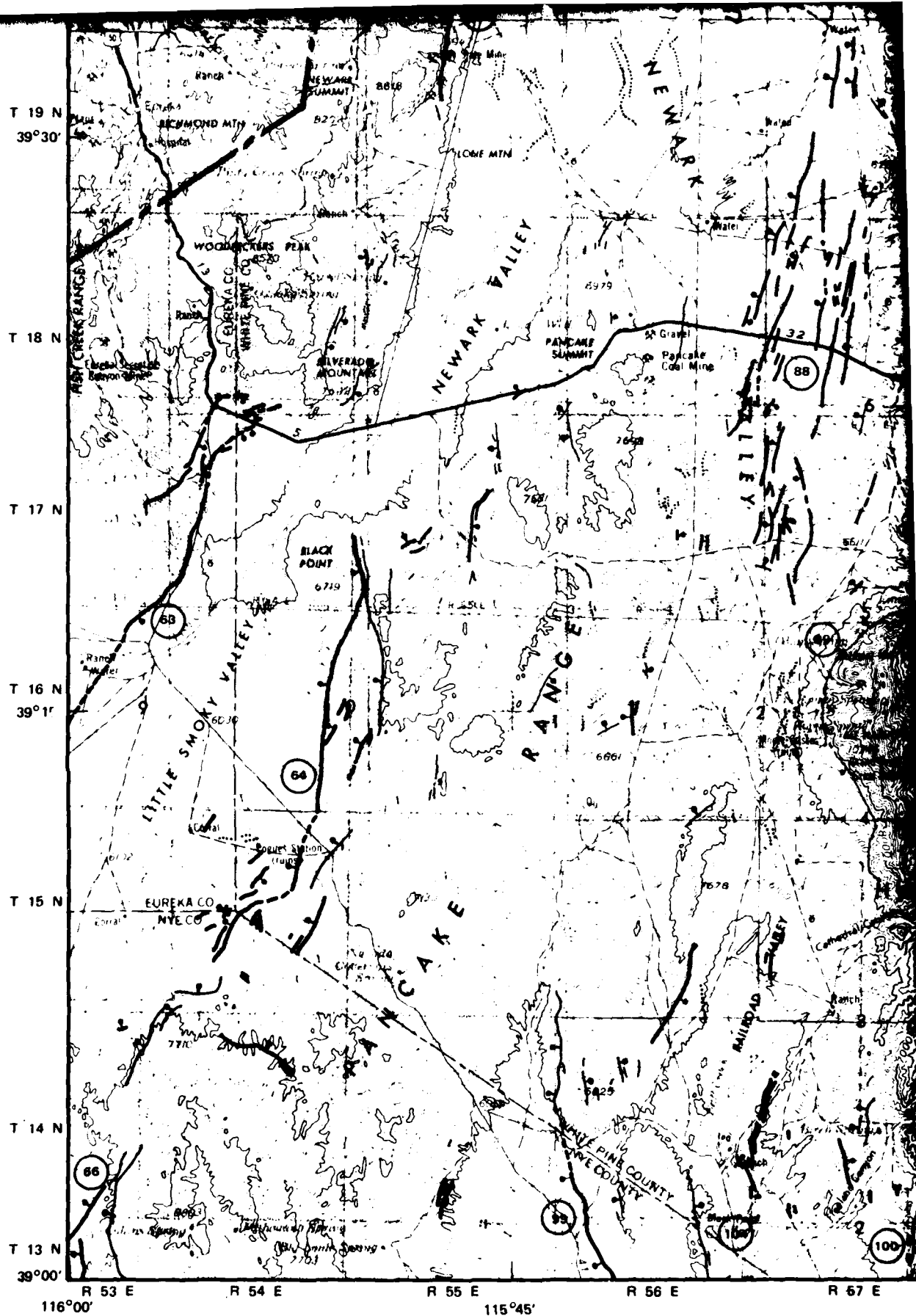






4

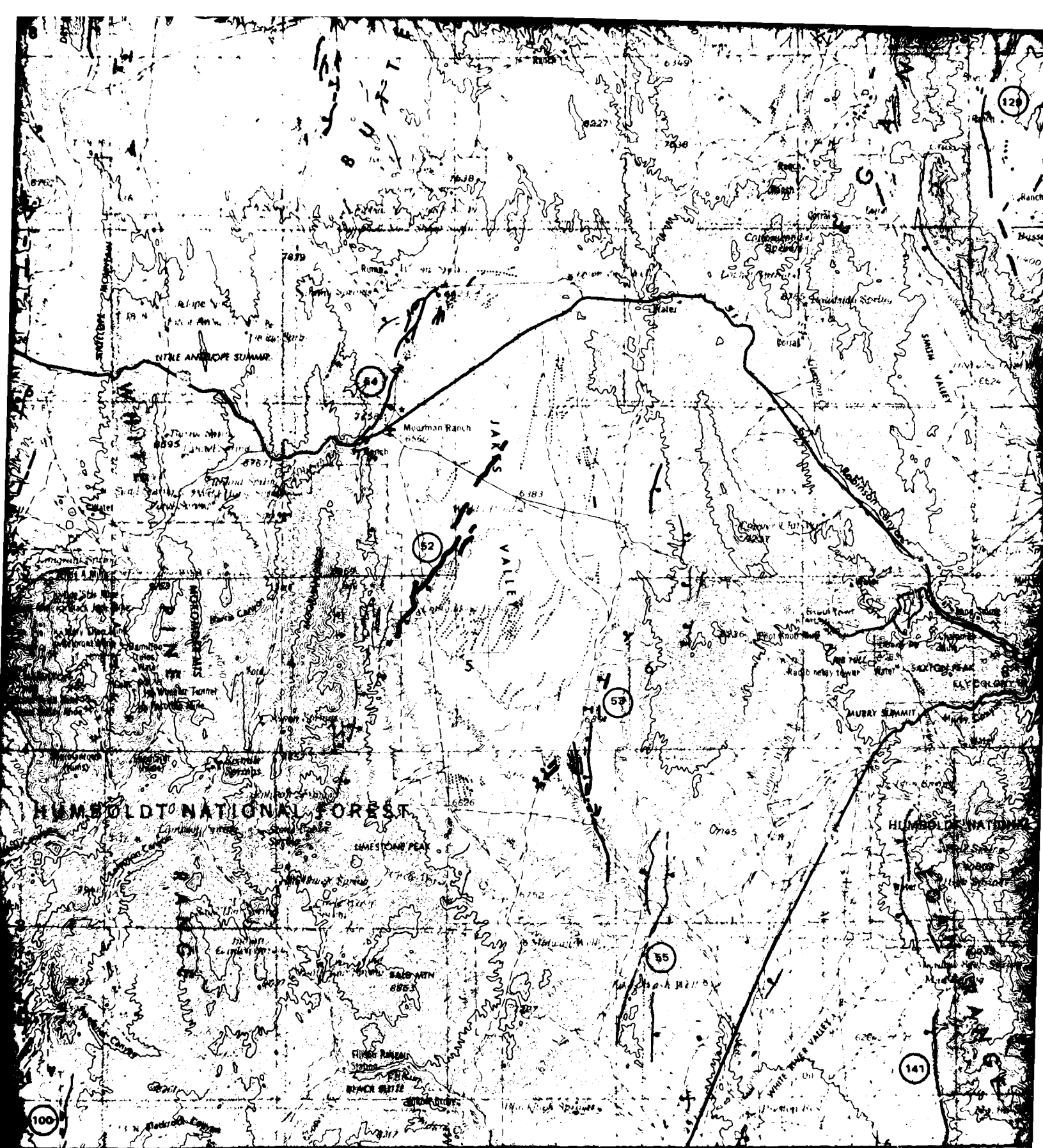




### EXPLANATION

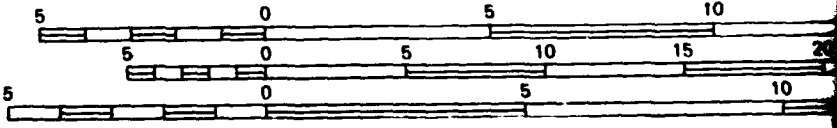
**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp portions of scarp are removed by erosion; dashed line indicates trace inferred between the scarps and (or) presence of lineaments between the scarps. Age of most recent movement





E 115°30' R 58 E R 59 E 115°15' R 60 E R 61 E R 62 E 115°00' E

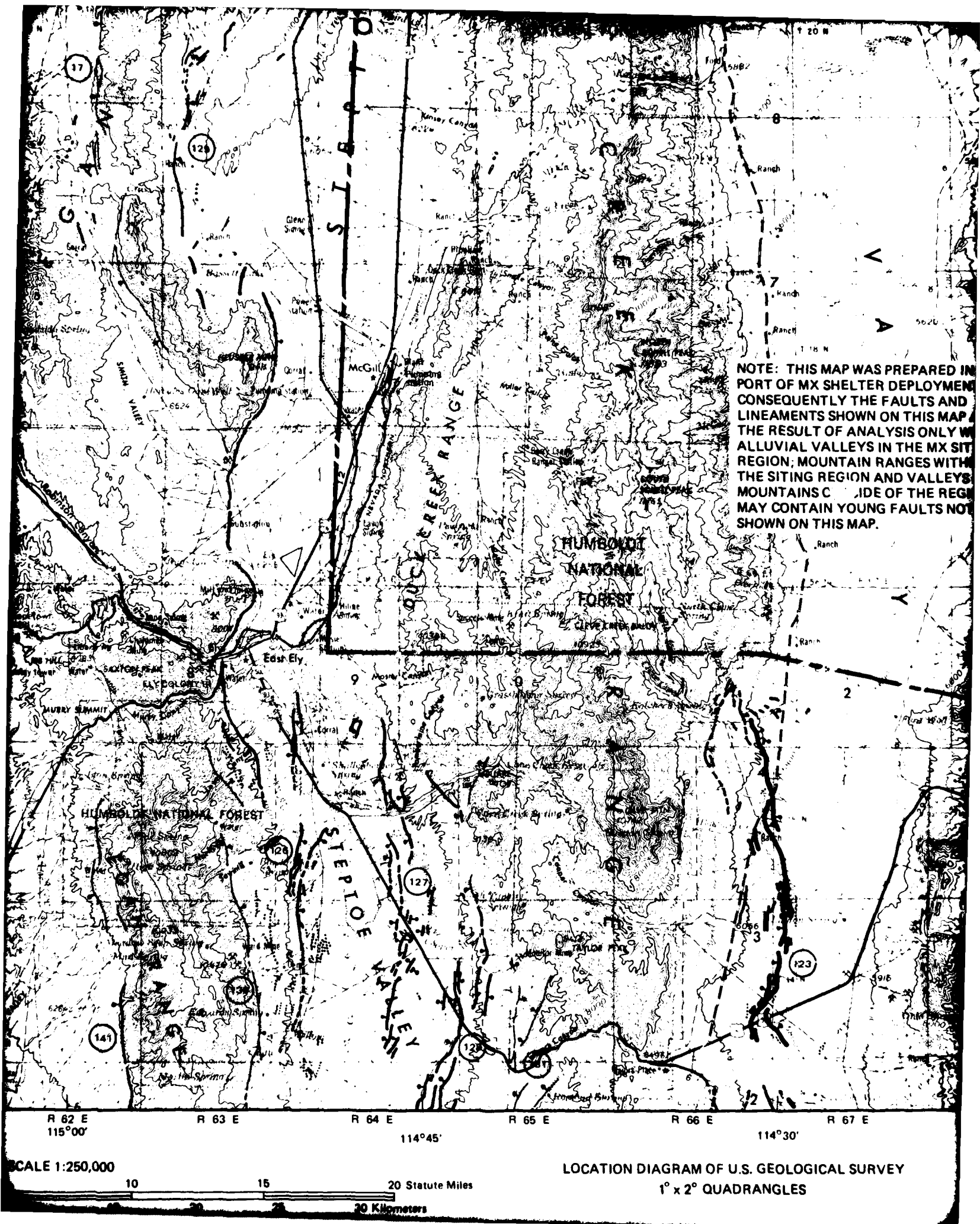
SCALE 1:250,000

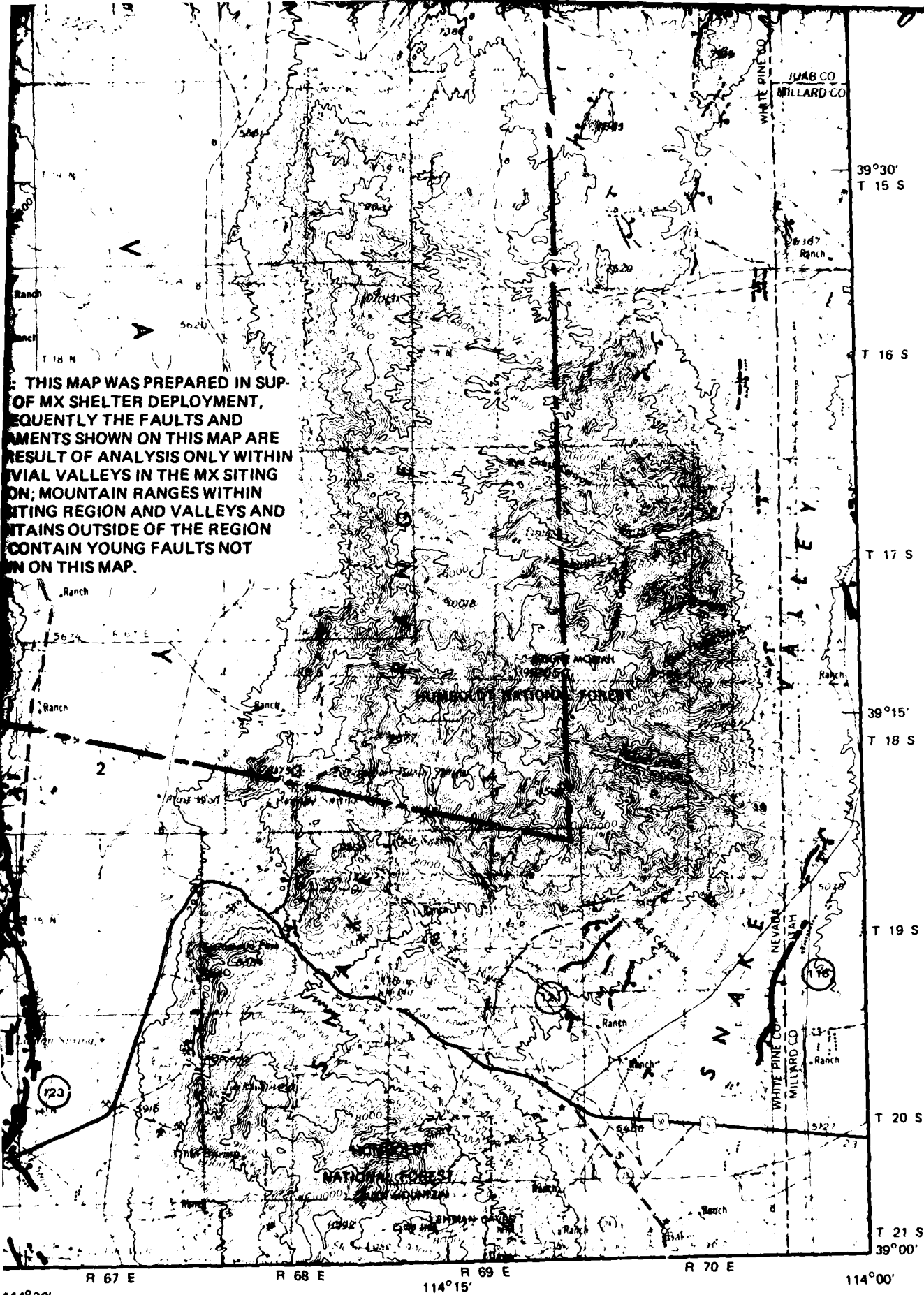


scarp except for narrow drainage crossings where small  
more widely spaced scarps based on alignment of

CONTOUR INTERVAL 200 FEET

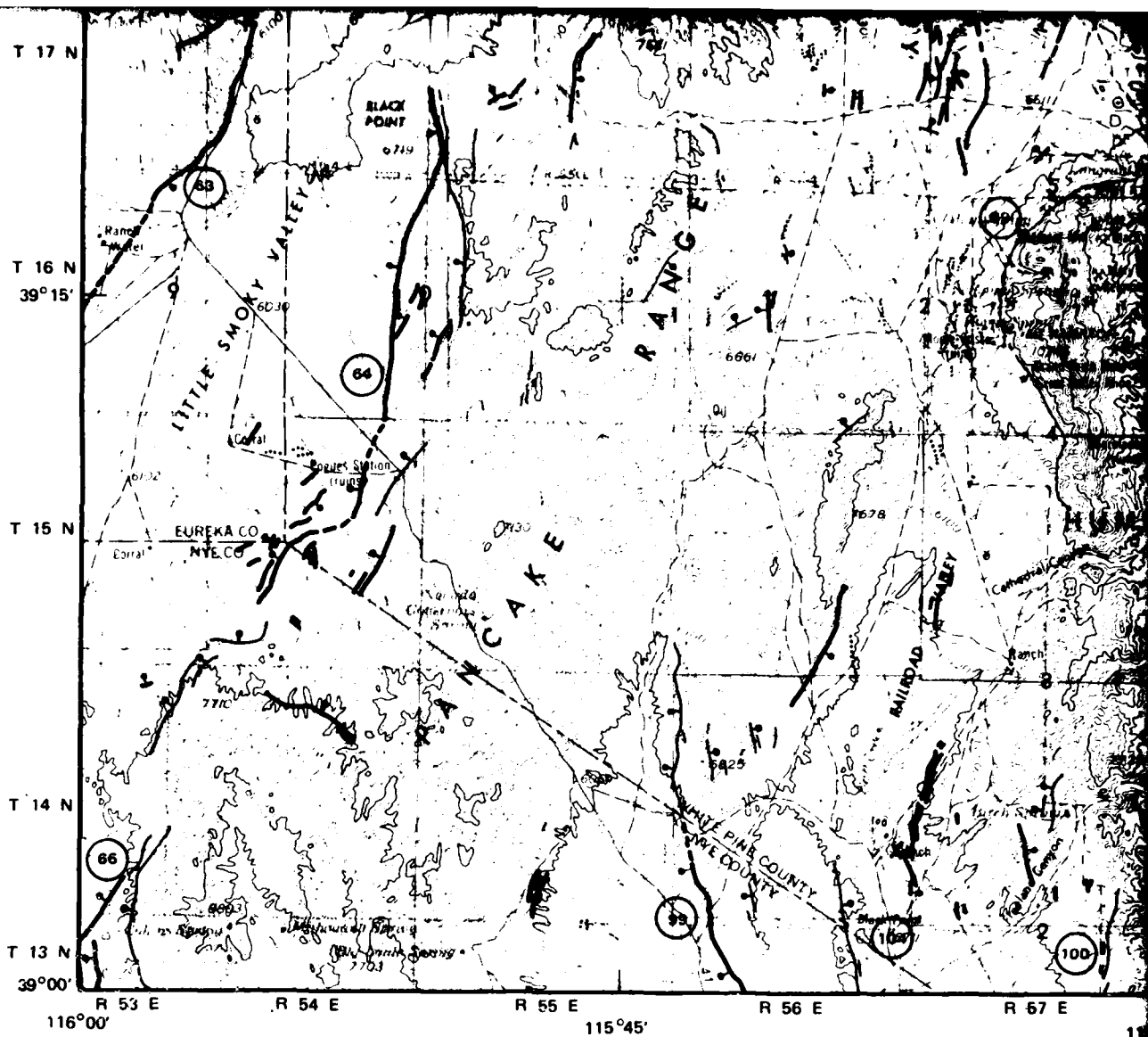




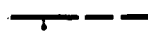


THIS MAP WAS PREPARED IN SUPPORT OF MX SHELTER DEPLOYMENT. EQUALLY THE FAULTS AND MOVEMENTS SHOWN ON THIS MAP ARE RESULT OF ANALYSIS ONLY WITHIN VALLEY VALLEYS IN THE MX SITING REGION; MOUNTAIN RANGES WITHIN SITING REGION AND VALLEYS AND MOUNTAINS OUTSIDE OF THE REGION CONTAIN YOUNG FAULTS NOT SHOWN ON THIS MAP.

GEOLOGICAL SURVEY  
SINGLES



## EXPLANATION



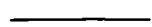
**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous scarp and portions of scarp are removed by erosion; dashed line indicates trace inferred between most scarps and (or) presence of lineaments between the scarps. Age of most recent movement of



Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).



Pleistocene ( $\approx 15,000$  years to 1.8 million years).



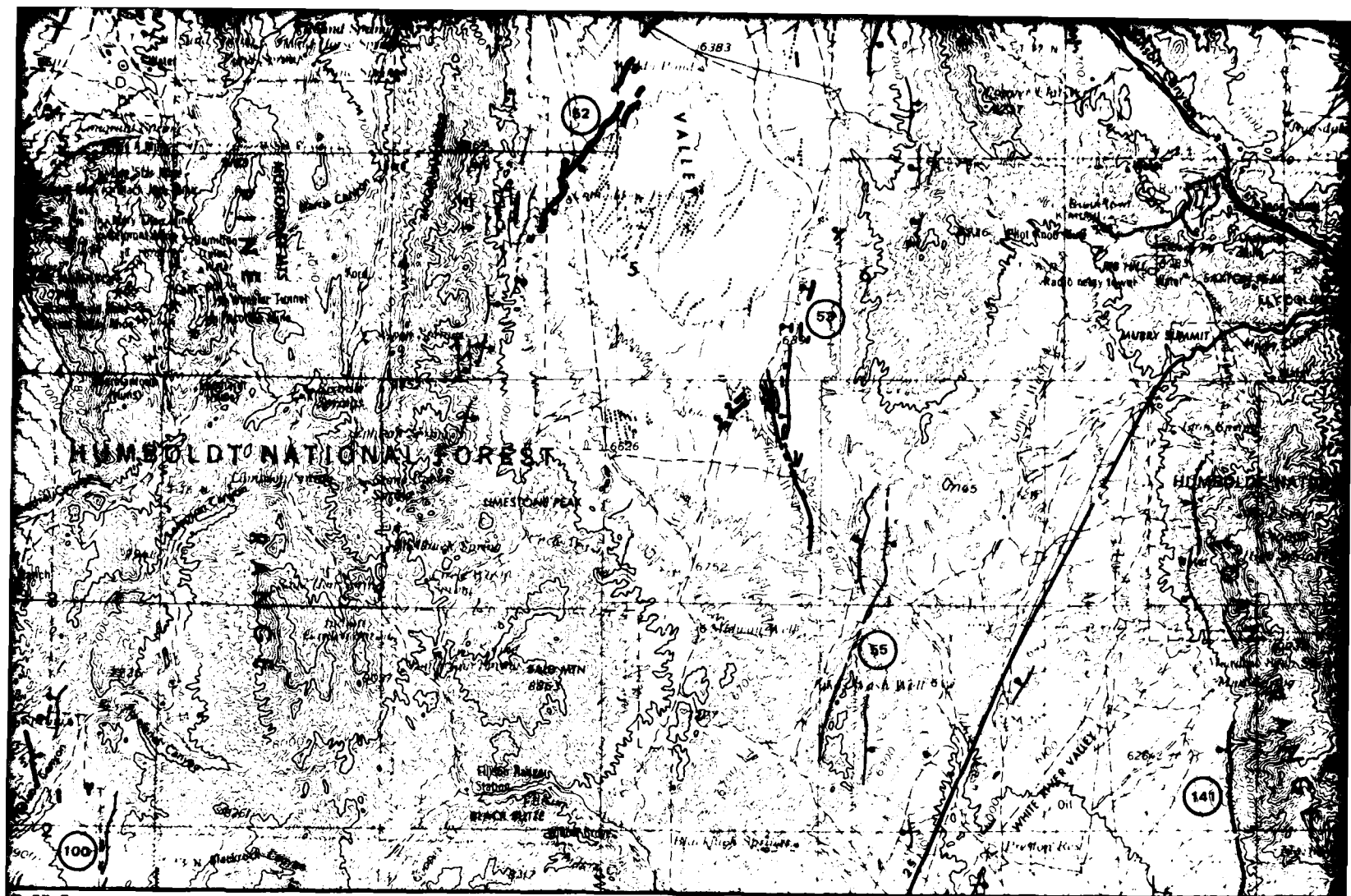
Indeterminate; late Tertiary or younger, probably Quaternary. Scarps are to lack of young stratigraphic units over trace of fault.



**LINEAMENT:** Vegetation alignments and tonal contrasts without topographic relief; believed to be

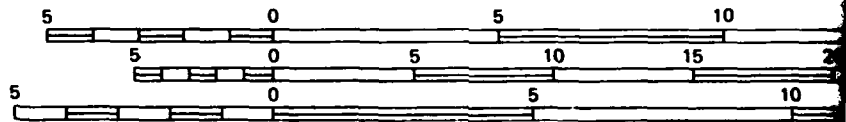


**APPROXIMATE BOUNDARY OF FAULT-STUDY REGION**



R 67 E 115°30' R 68 E 115°15' R 69 E R 60 E R 61 E R 62 E 115°00'

SCALE 1:250,000



as fault scarp except for narrow drainage crossings where small  
d between more widely spaced scarps based on alignment of  
nt movement denoted by line width.

(5,000 years).

CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INT  
Base from U.S. Geological Survey, Ely Quadrangle, Revised  
1:250,000, Transverse Mercator Projection

ary. Scarps are prominent but age cannot be determined due

hic relief; believed to be faults or fault-related cracks.

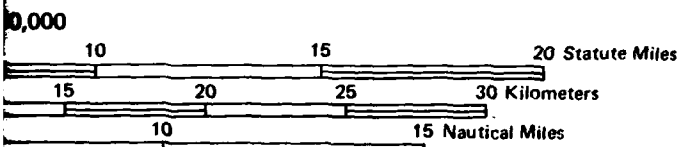


NORTH

MAY CONTAIN YOUNG FAULTS NOT SHOWN ON THIS MAP.

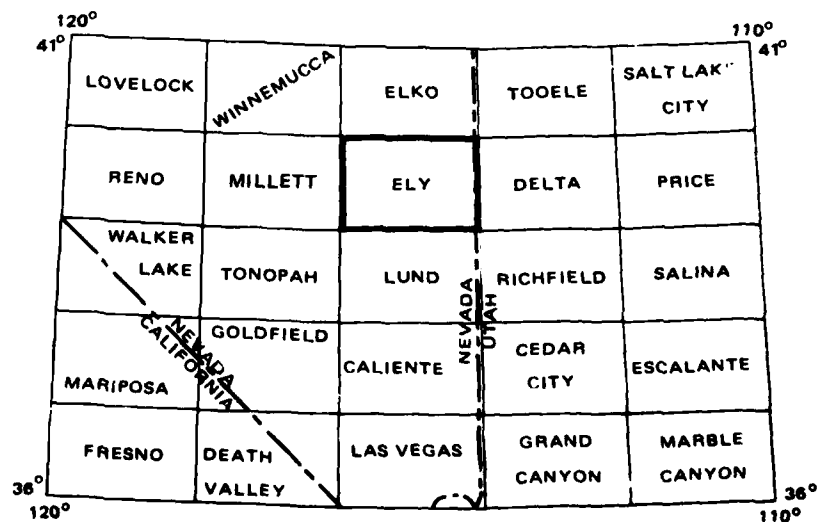


R 63 E R 64 E R 65 E R 66 E R 67 E R 68 E  
114°45' 114°30'

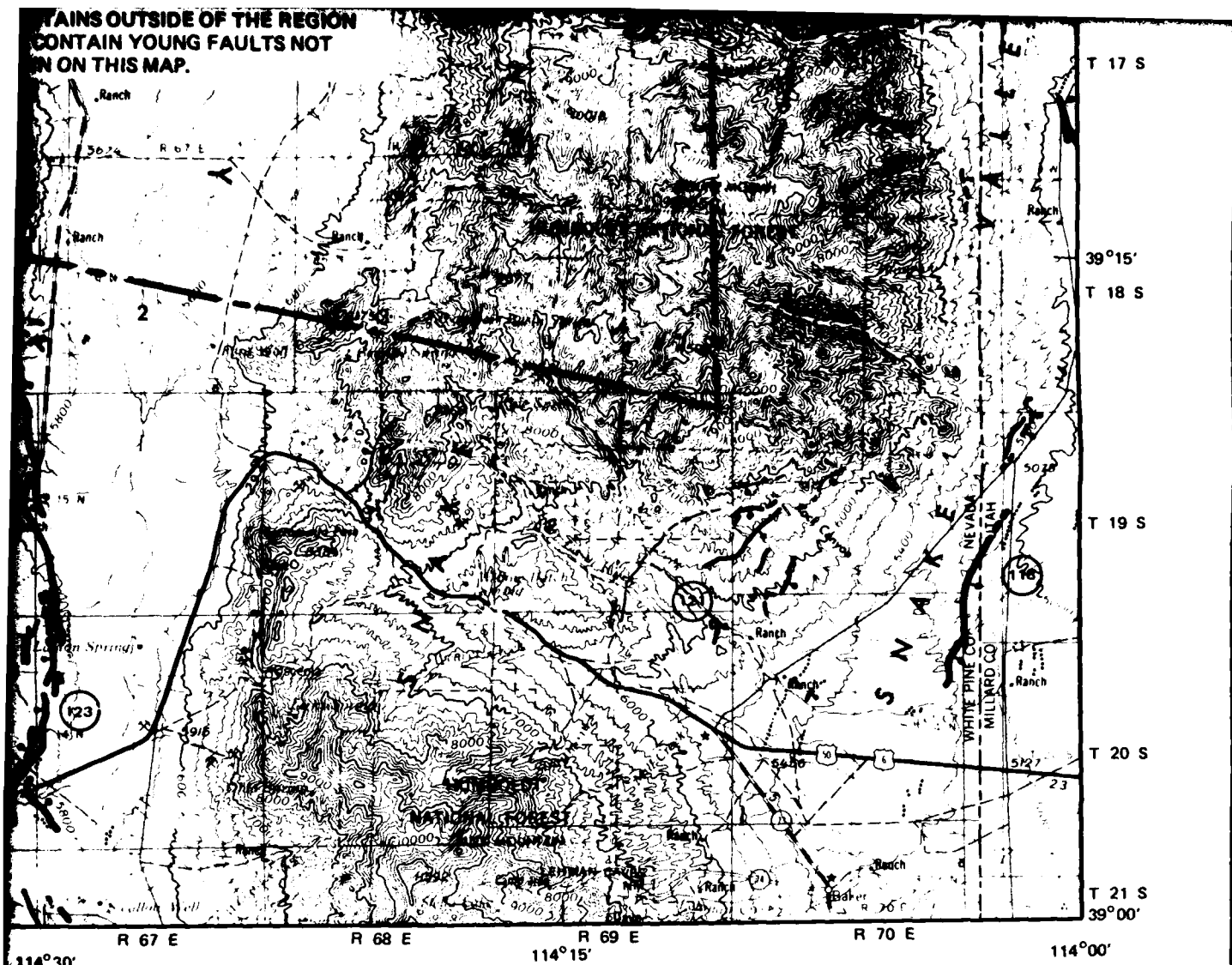


1:250,000  
VERTICAL SCALE 200 FEET  
HORIZONTAL SCALE AT 100 FOOT INTERVALS  
NAD 83 Datum, Revised 1971  
Mercator Projection

LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES



PLAINS OUTSIDE OF THE REGION  
CONTAIN YOUNG FAULTS NOT  
ON THIS MAP.



GEOLOGICAL SURVEY  
ANGLES

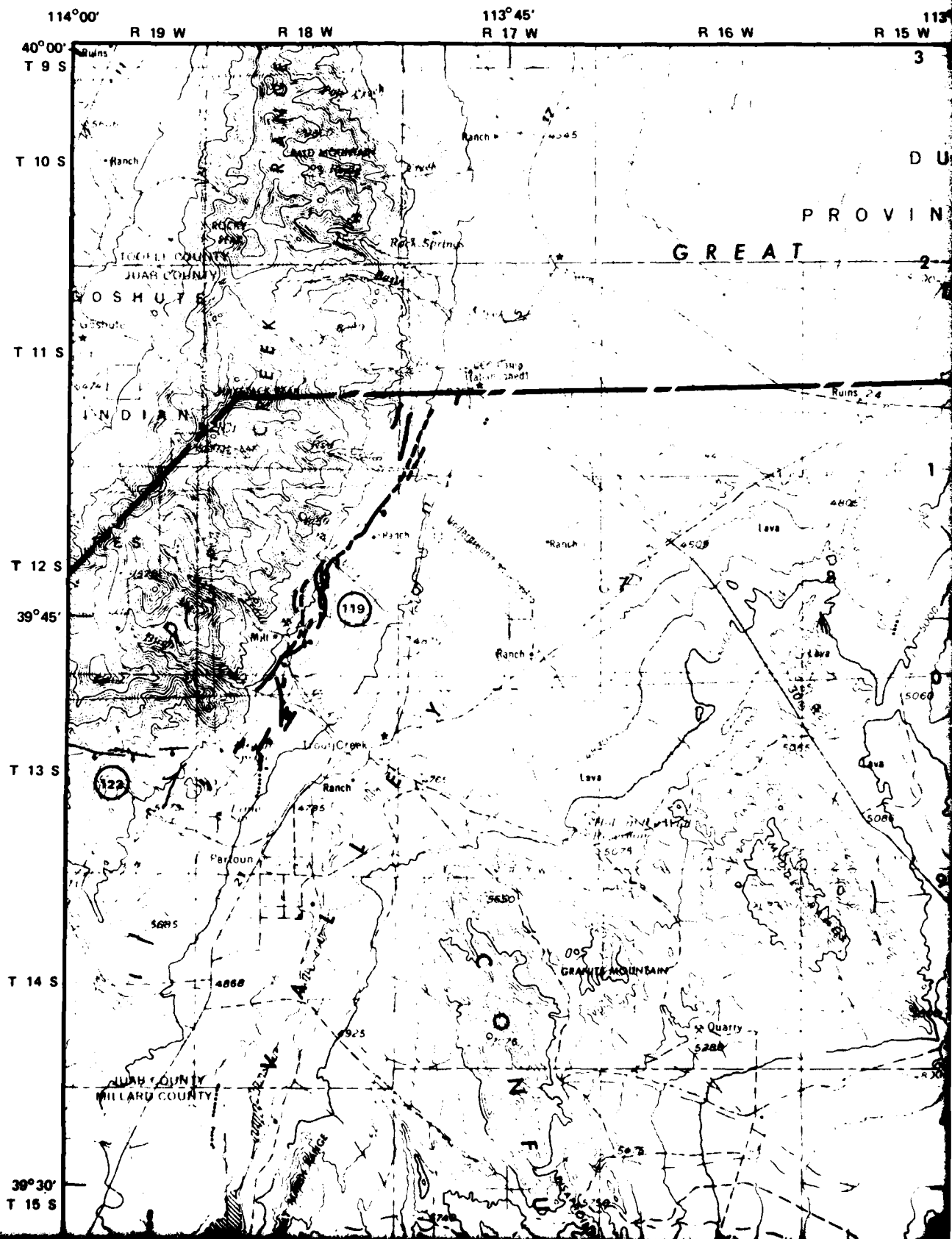
TOOELE	SALT LAKE CITY
DELTA	PRICE
RICHFIELD	SALINA
CEDAR CITY	ESCALANTE
GRAND CANYON	MARBLE CANYON

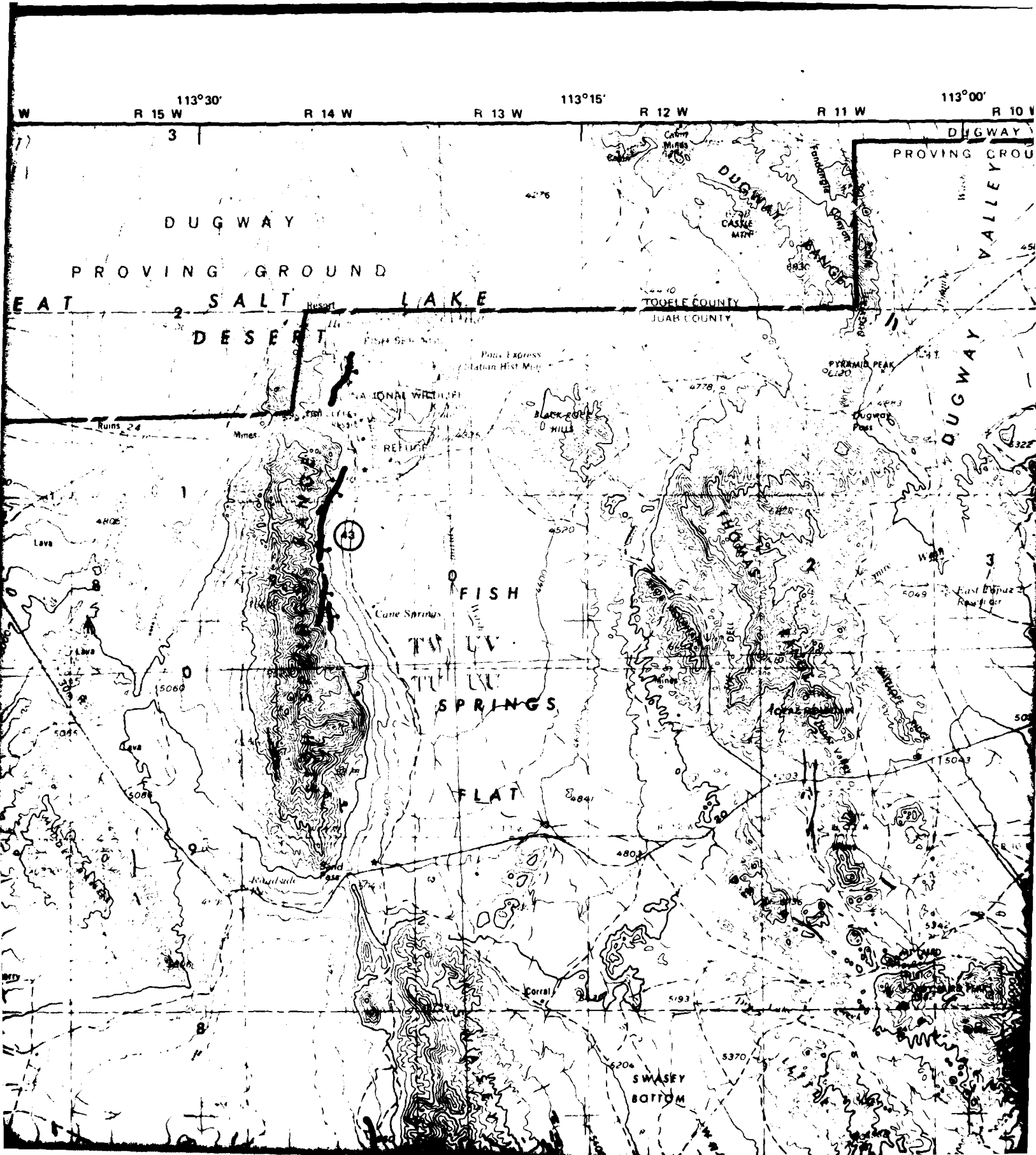
**Ertec**  
The Earth Technology Corporation

MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX

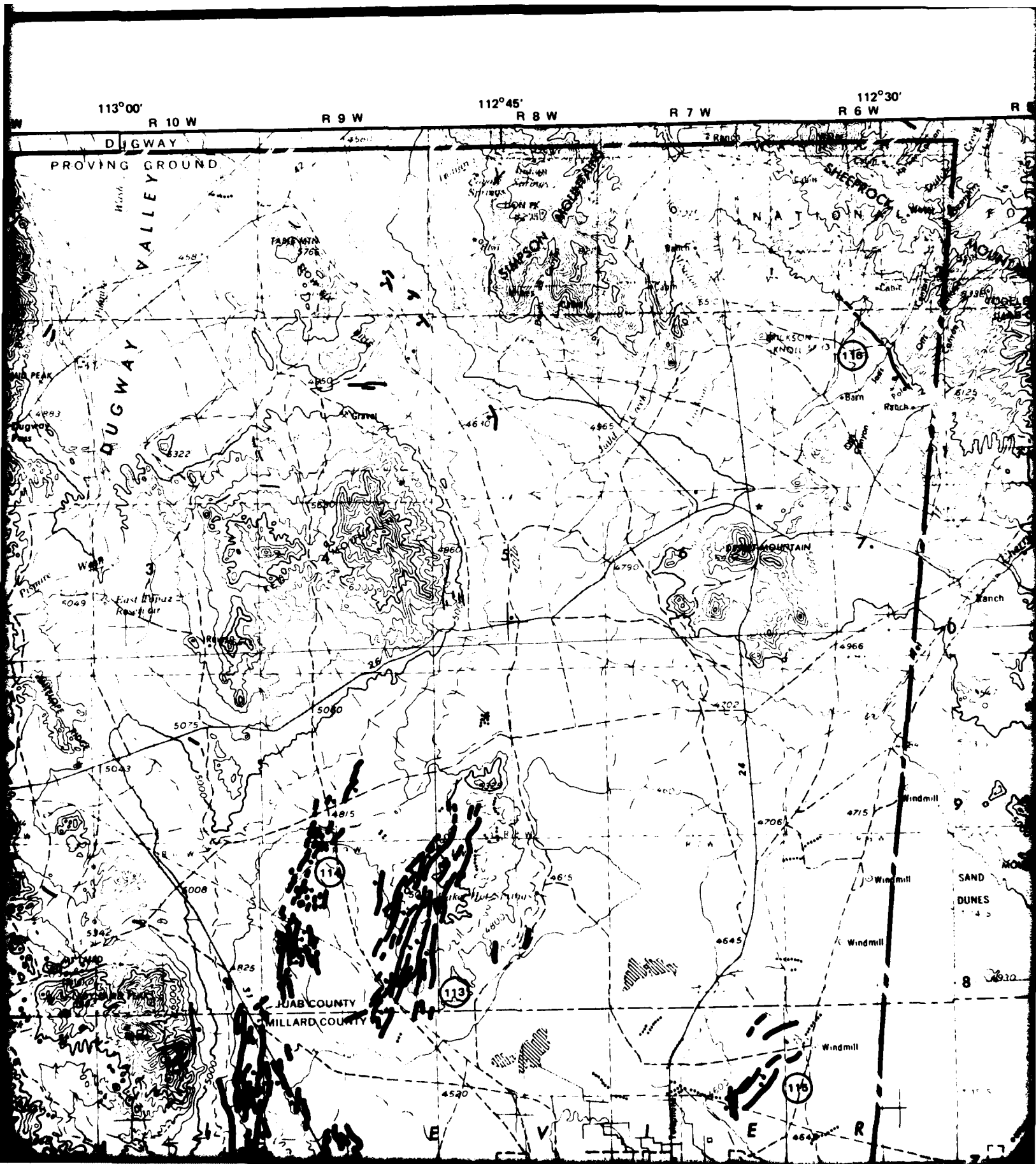
**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEAMENTS, MX SITING REGION  
ELY 1° x 2° QUADRANGLE, NEVADA  
PLATE A3**

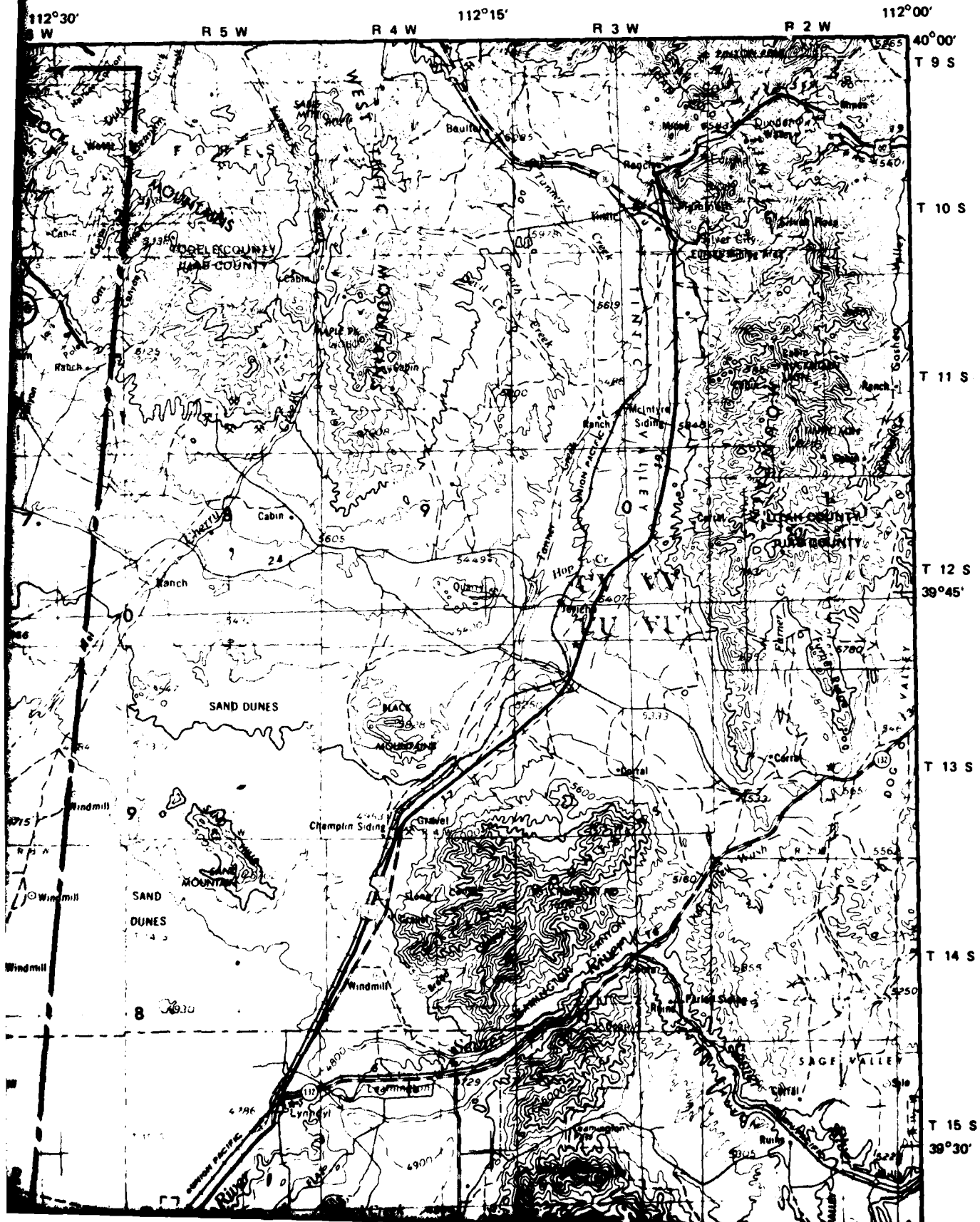




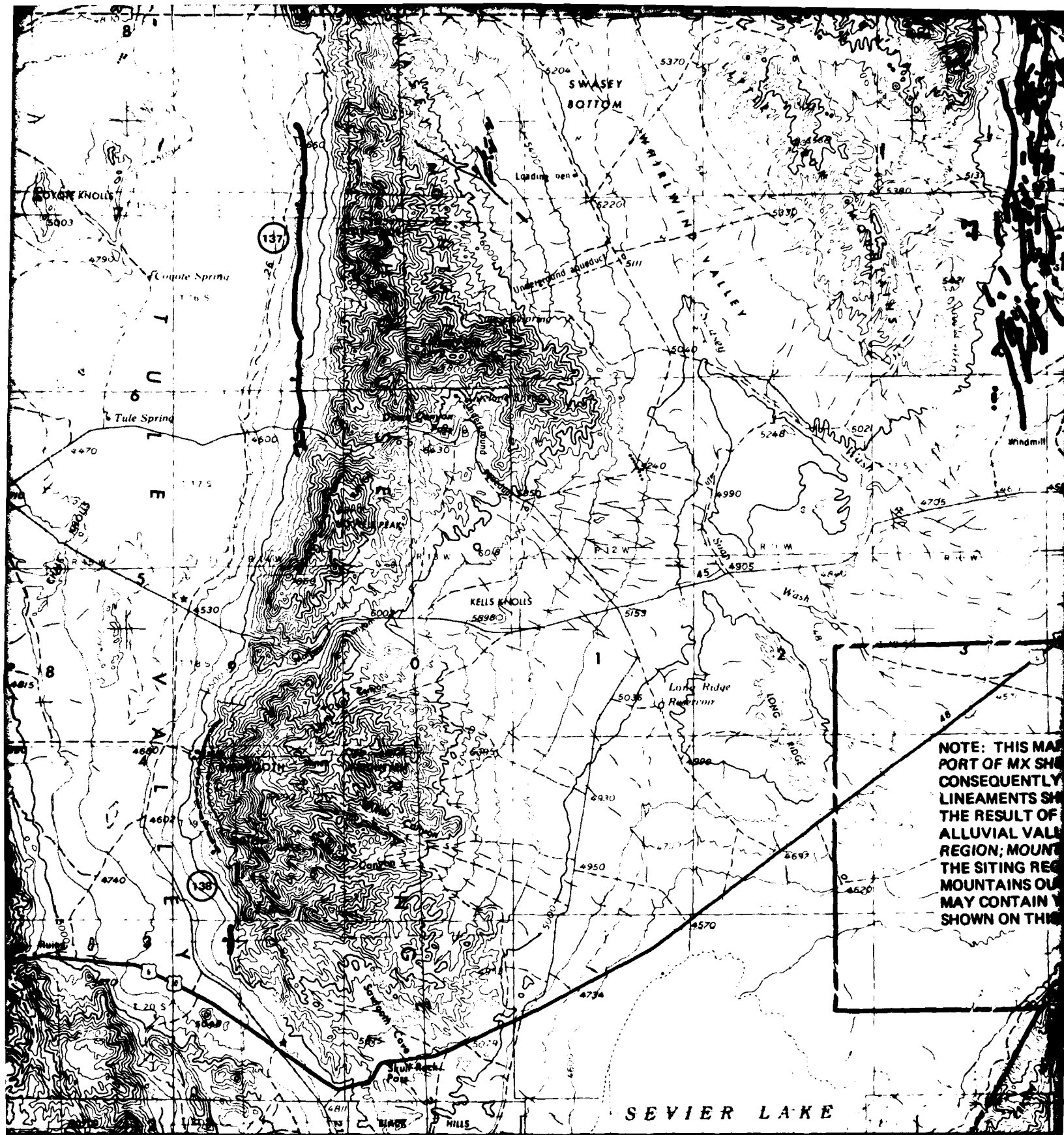






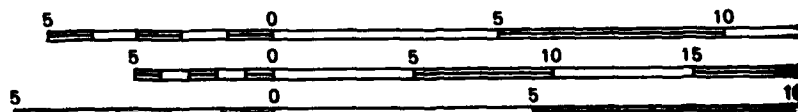






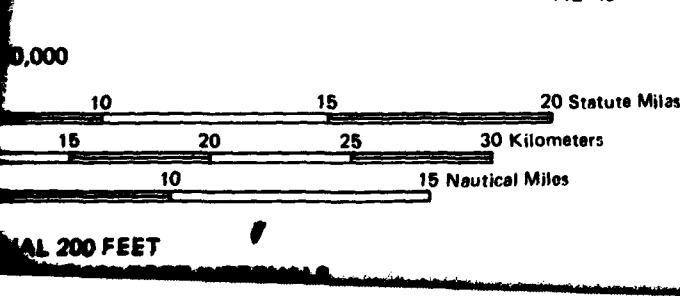
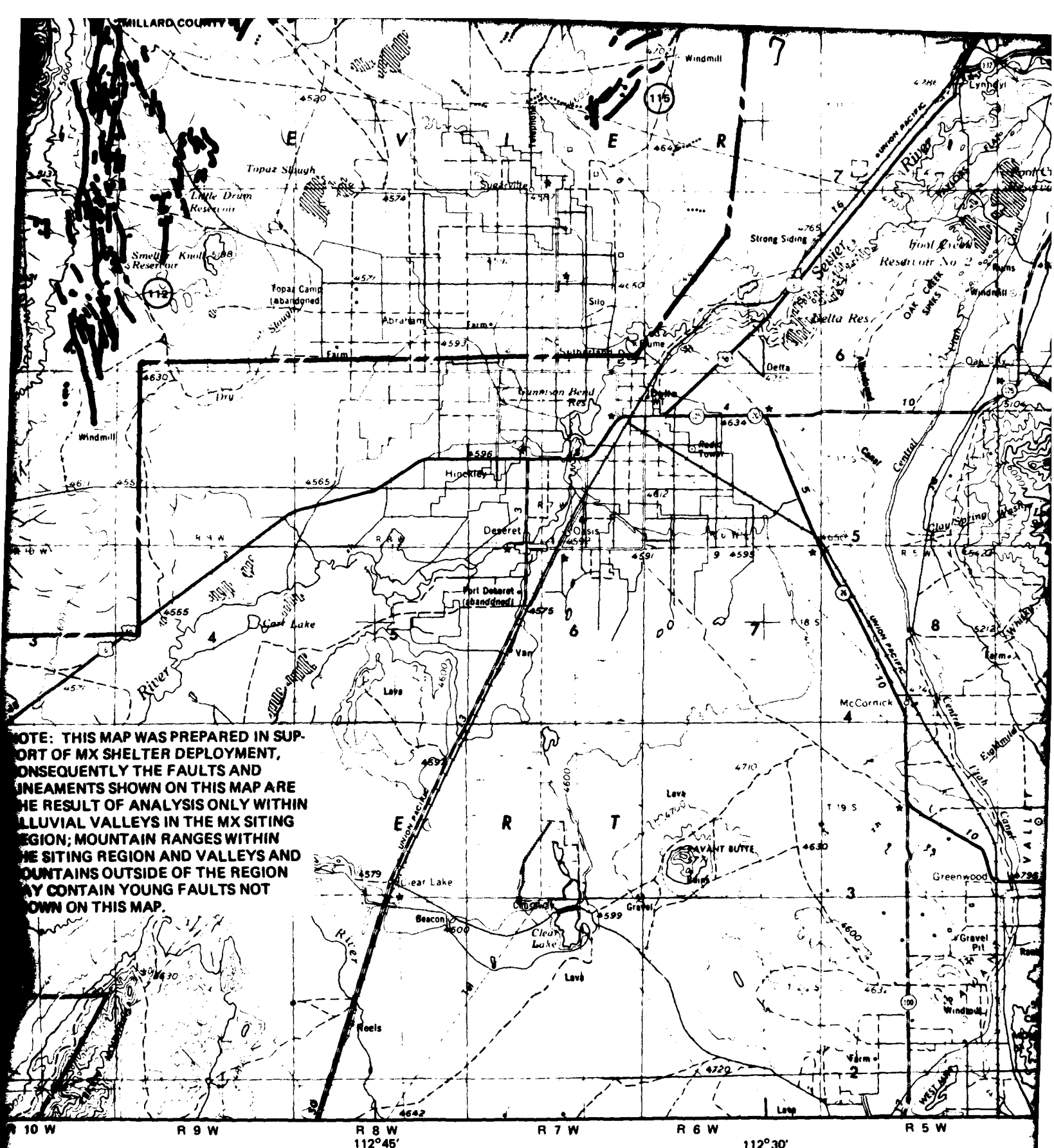
R 15 W 113°30' R 14 W R 13 W 113°15' R 12 W R 11 W 113°00' R 10 W

SCALE 1:250,000

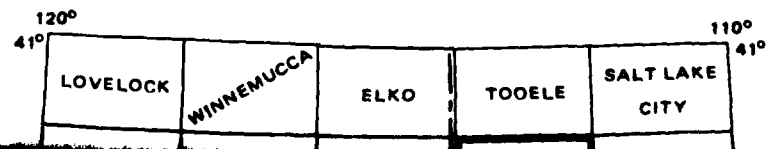


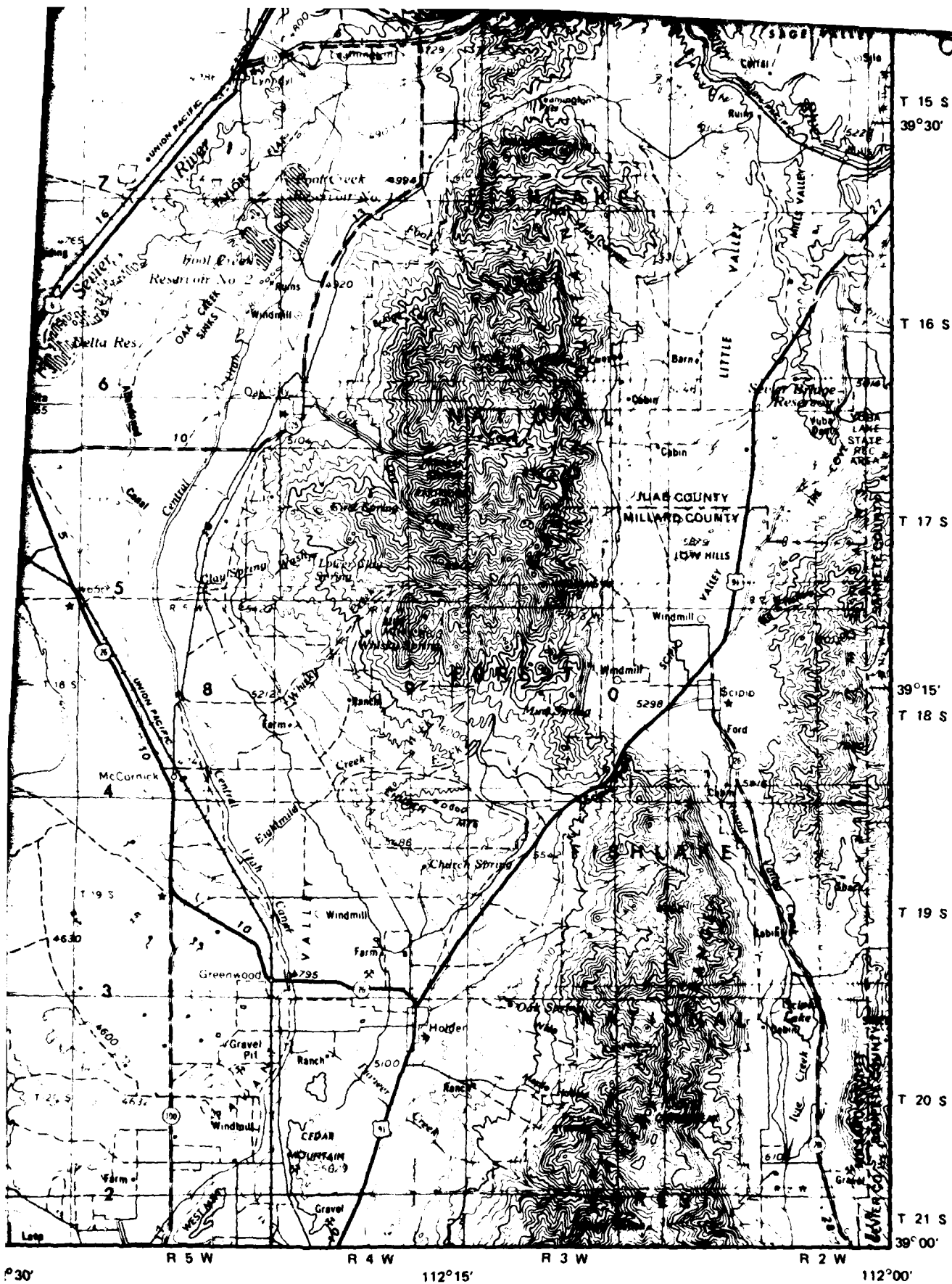
CONTOUR INTERVAL 200 FEET

is fault scarp except for narrow drainage crossings where small  
d between more widely spaced scarps based on alignment of  
of movement denoted by line width.

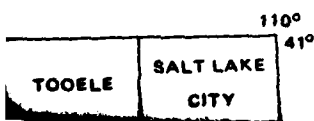


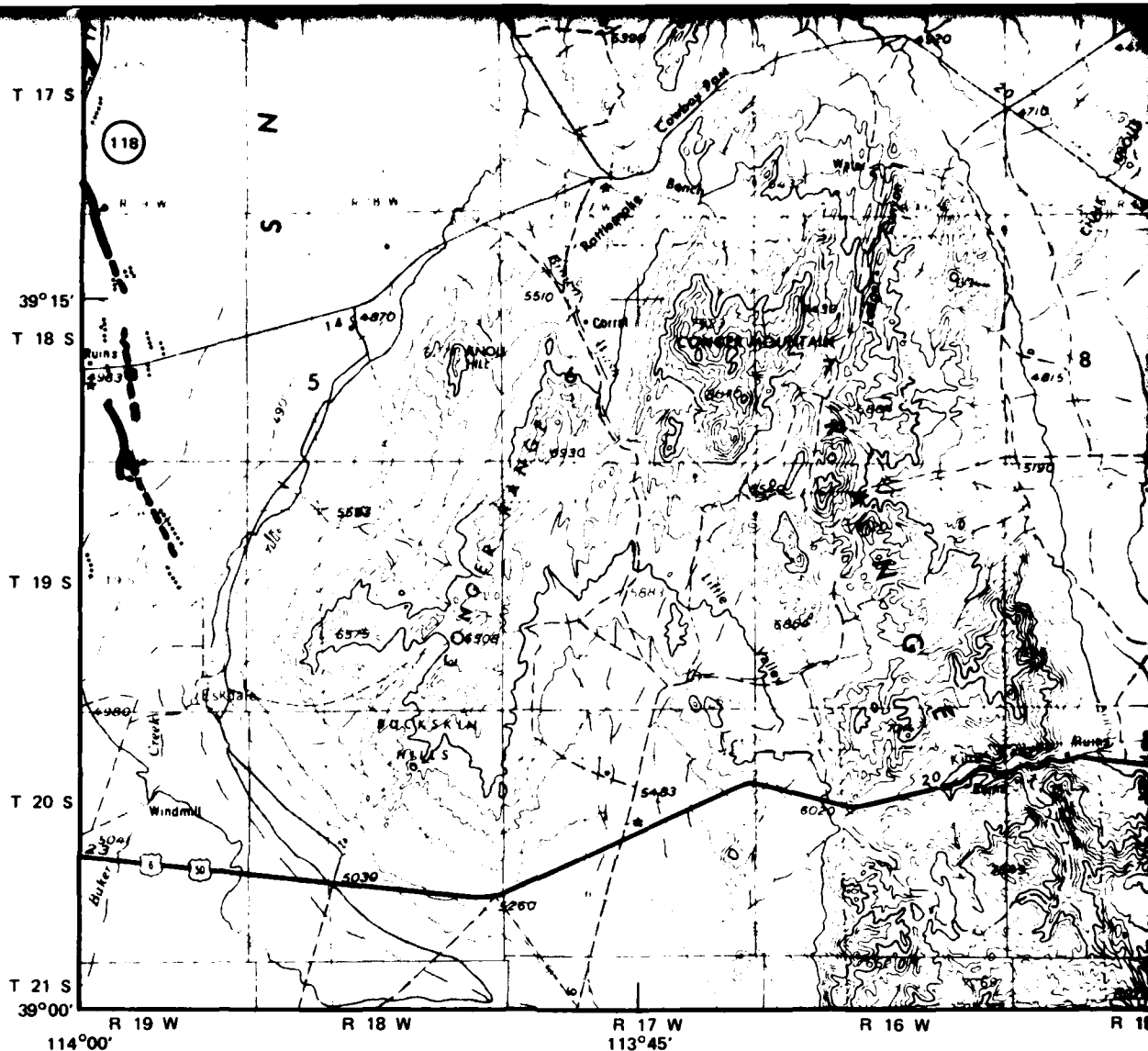
LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES





OLOGICAL SURVEY  
GLES

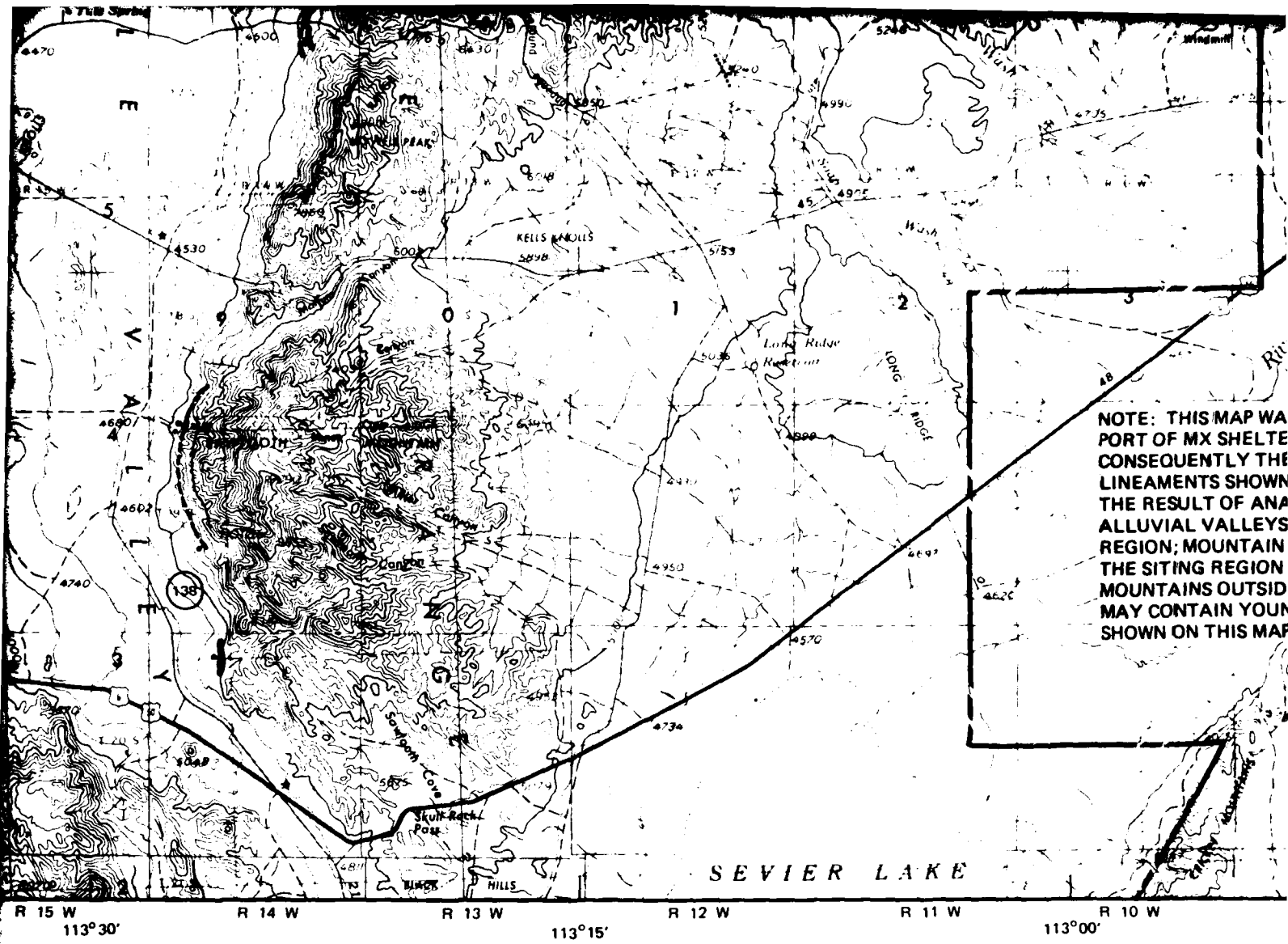




## EXPLANATION

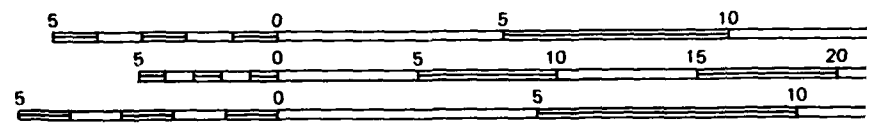
- FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp; portions of scarp are removed by erosion; dashed line indicates trace inferred between scarp and (or) presence of lineaments between the scarps. Age of most recent movement:
- Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).
  - Pleistocene ( $\approx 15,000$  years to 1.8 million years).
  - Indeterminate; late Tertiary or younger, probably Quaternary. Scarps due to lack of young stratigraphic units over trace of fault.
- LINEAMENT:** Vegetation alignments and tonal contrasts without topographic relief; but
- APPROXIMATE BOUNDARY OF FAULT-STUDY REGION**





NOTE: THIS MAP WAS PART OF MX SHELTER CONSEQUENTLY THE LINEAMENTS SHOWN ARE THE RESULT OF AN ALLUVIAL VALLEYS REGION; MOUNTAIN THE SITING REGION MOUNTAINS OUTSIDE MAY CONTAIN YOUR SHOWN ON THIS MAP

SCALE 1:250,000



CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INT  
Base from U.S. Geological Survey, Delta Quadrangle, Revision  
1:250,000, Transverse Mercator Projection



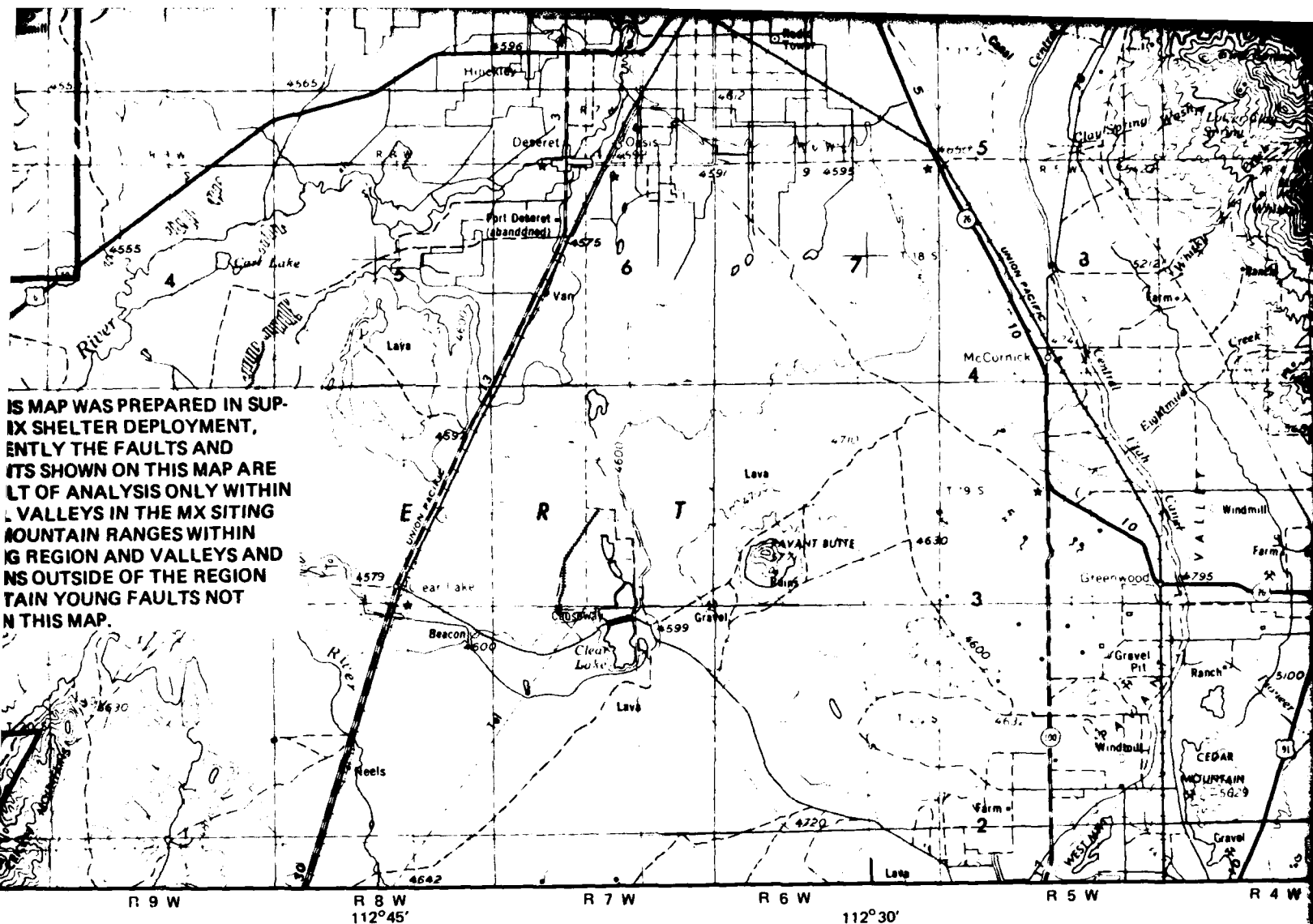
scarp except for narrow drainage crossings where small  
then more widely spaced scarps based on alignment of  
moment denoted by line width.

years).

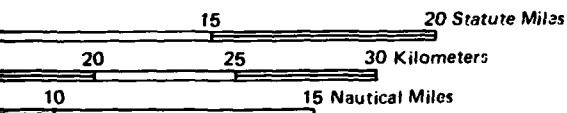
scarps are prominent but age cannot be determined due

if; believed to be faults or fault-related cracks.

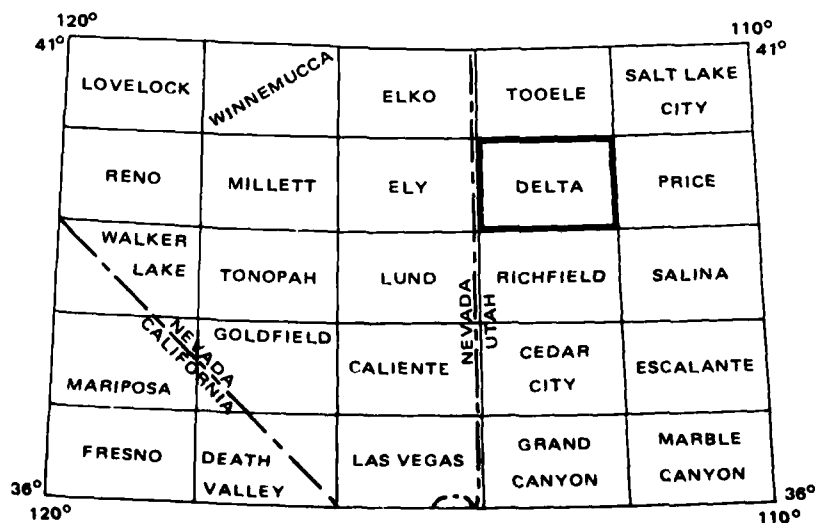


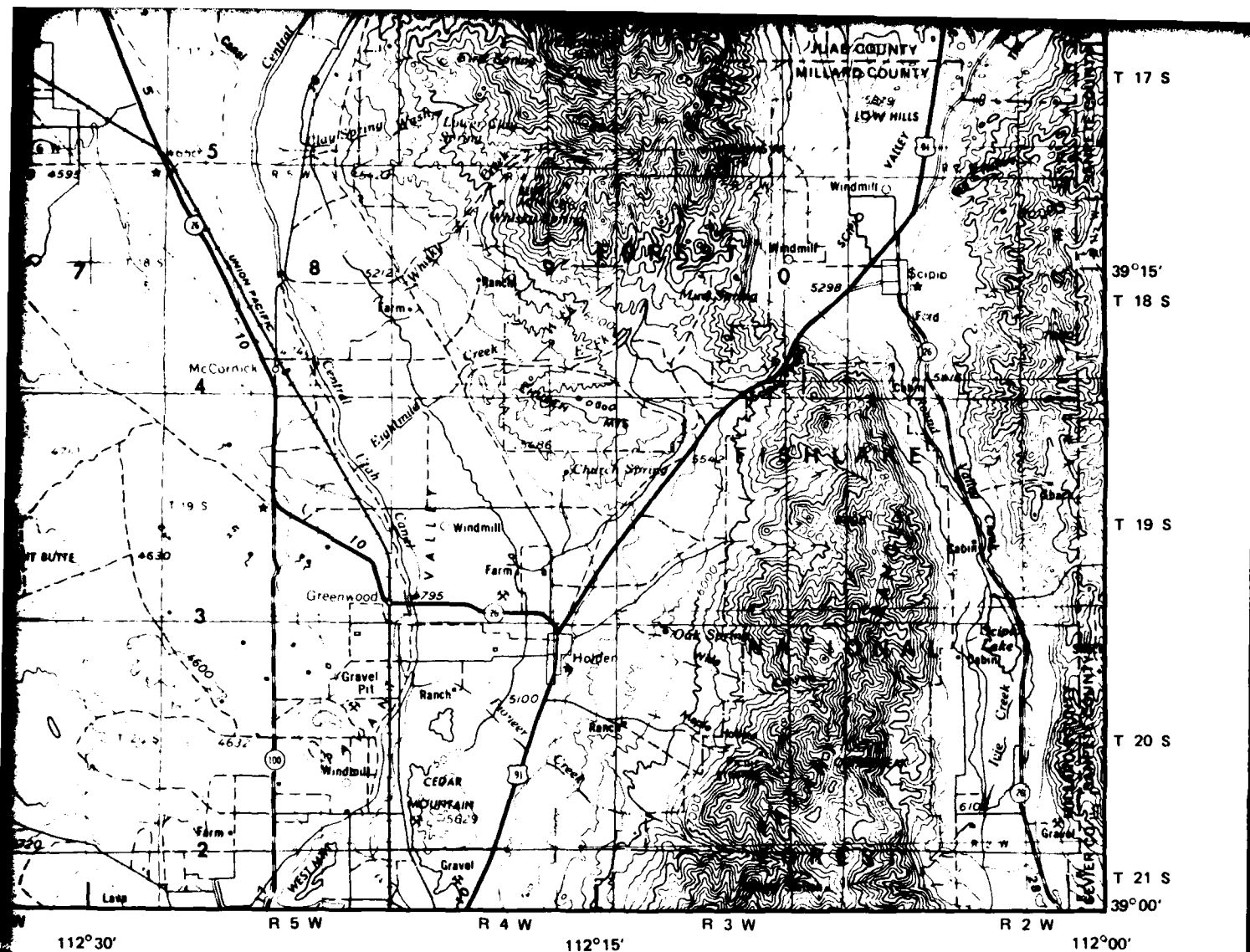


LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
 1° x 2° QUADRANGLES



EET  
 0 FOOT INTERVALS  
 angle, Revised 1972,  
 ojection





U.S. GEOLOGICAL SURVEY  
 QUADRANGLES

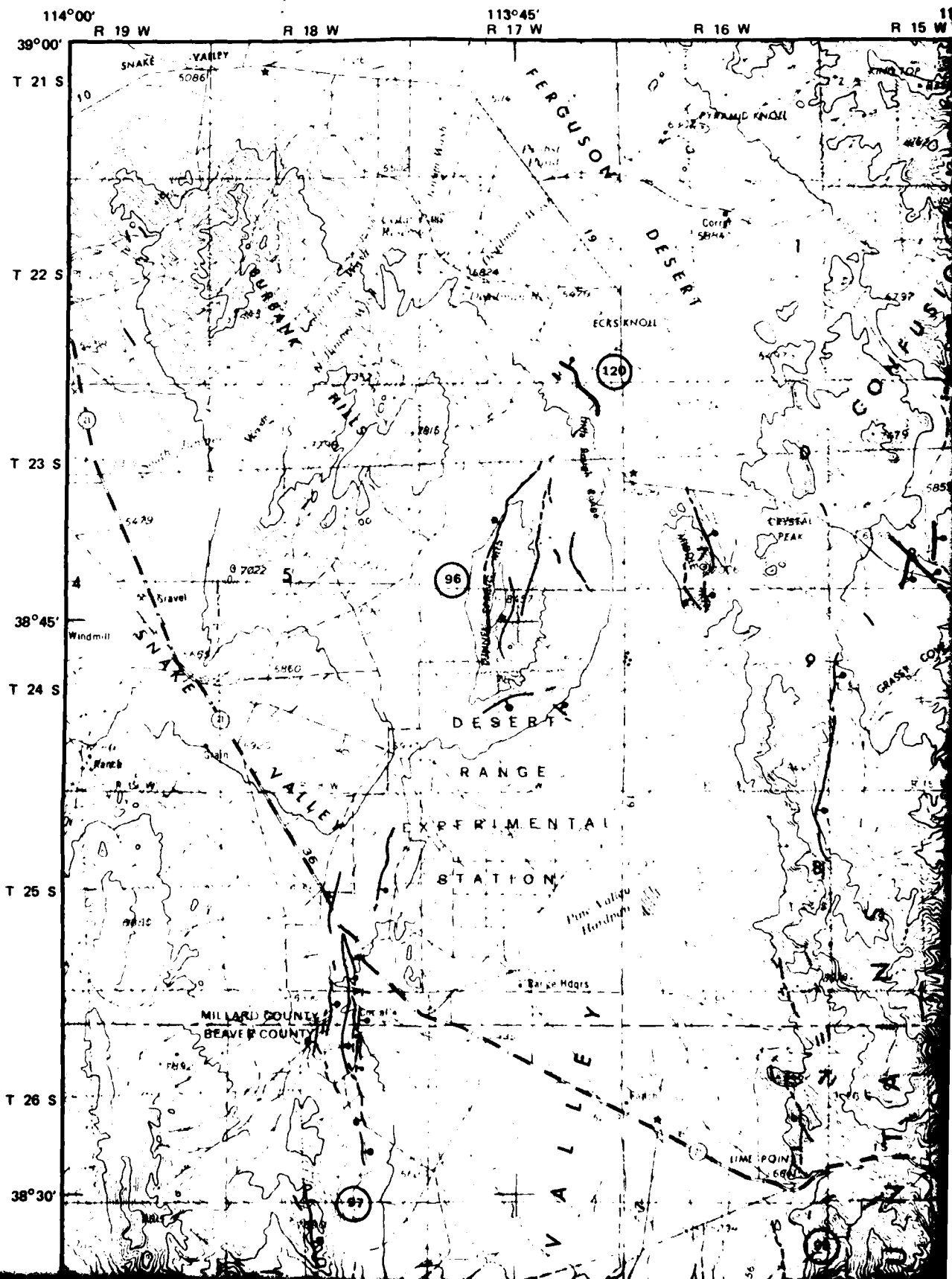
BLK	TOOELE	SALT LAKE CITY
ELY	DELTA	PRICE
UND	RICHFIELD	SALINA
ENTE	CEGAR CITY	ESCALANTE
VEGAS	GRAND CANYON	MARBLE CANYON

**Ertec**

The Earth Technology Corporation

MX SITING INVESTIGATION  
 DEPARTMENT OF THE AIR FORCE  
 BMO/AFRC-MX

**PRELIMINARY MAP OF YOUNG FAULTS  
 AND LINEAMENTS, MX SITING REGION  
 DELTA 1°x2° QUADRANGLE, UTAH  
 PLATE A4**



113°30' R 15 W

R 14 W

R 13 W

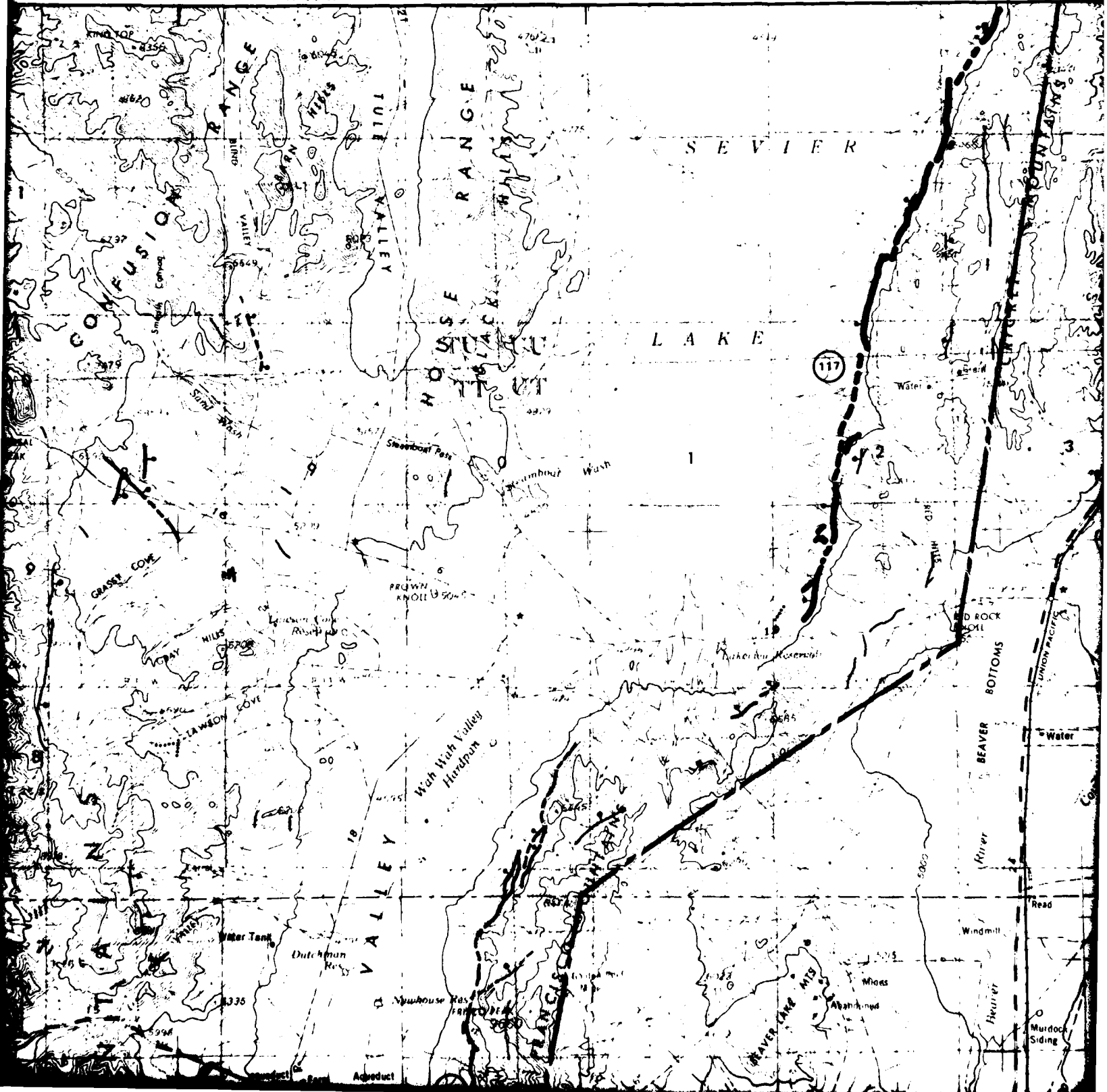
113°15'

R 12 W

R 11 W

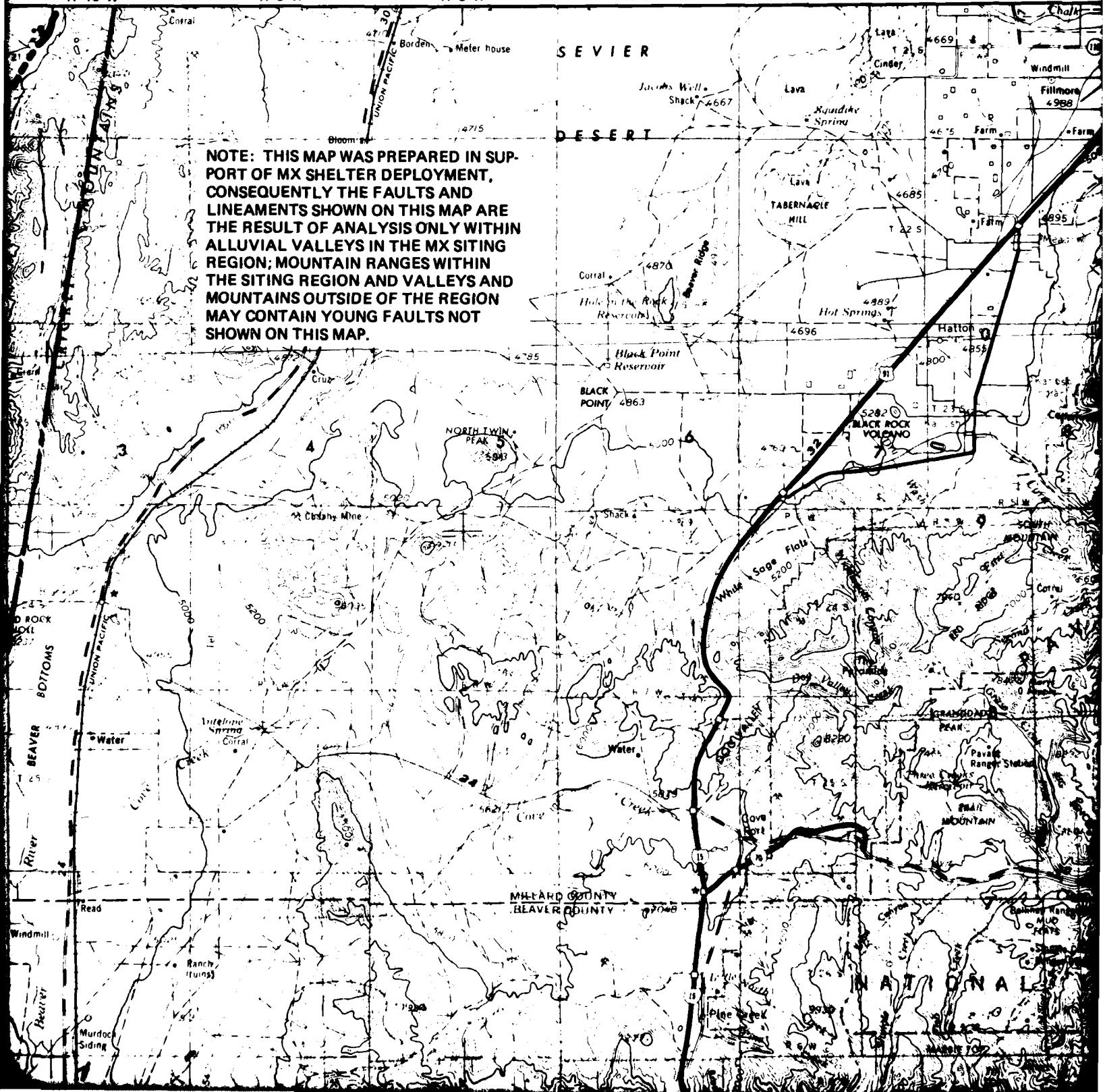
113°00'

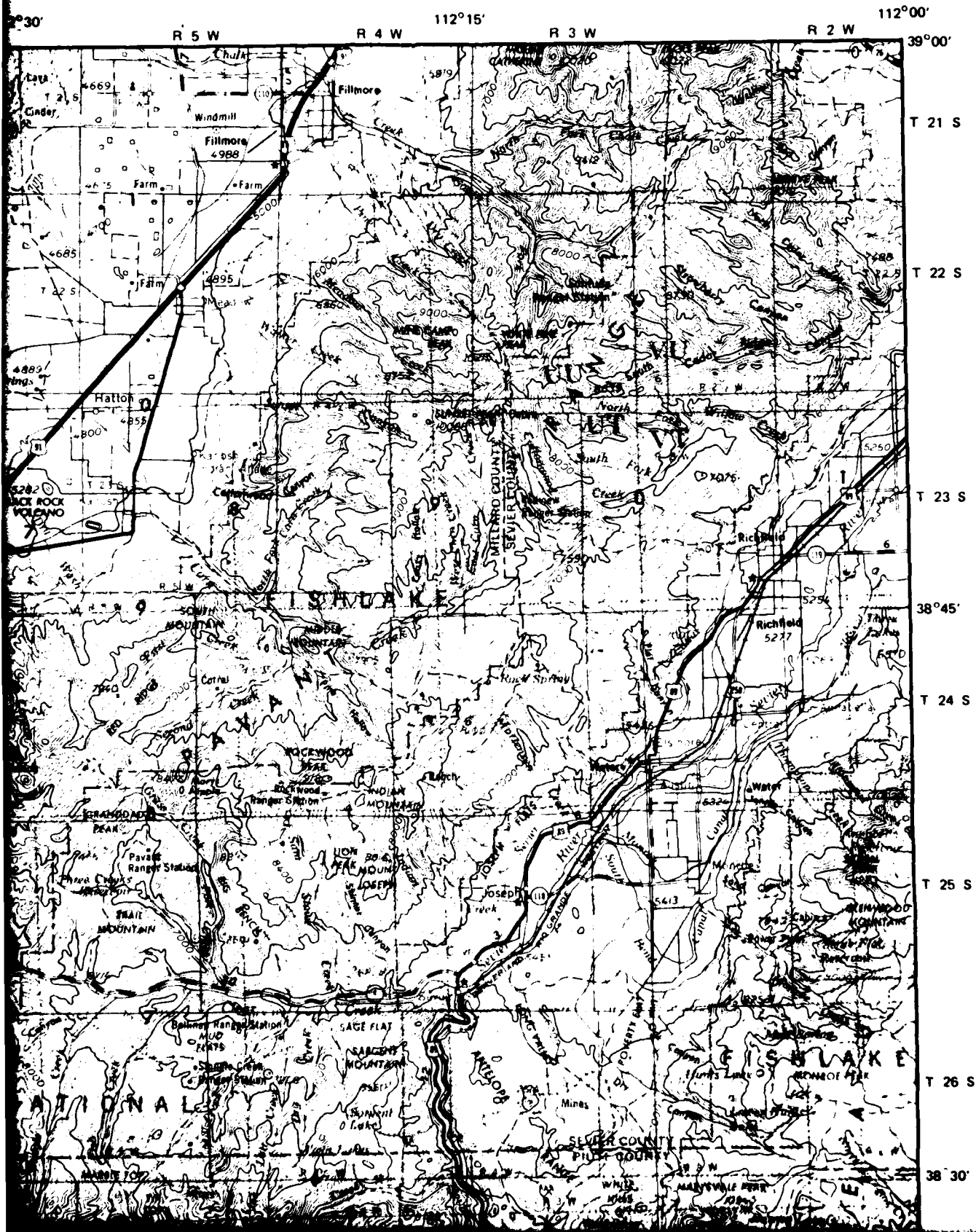
R 10 W



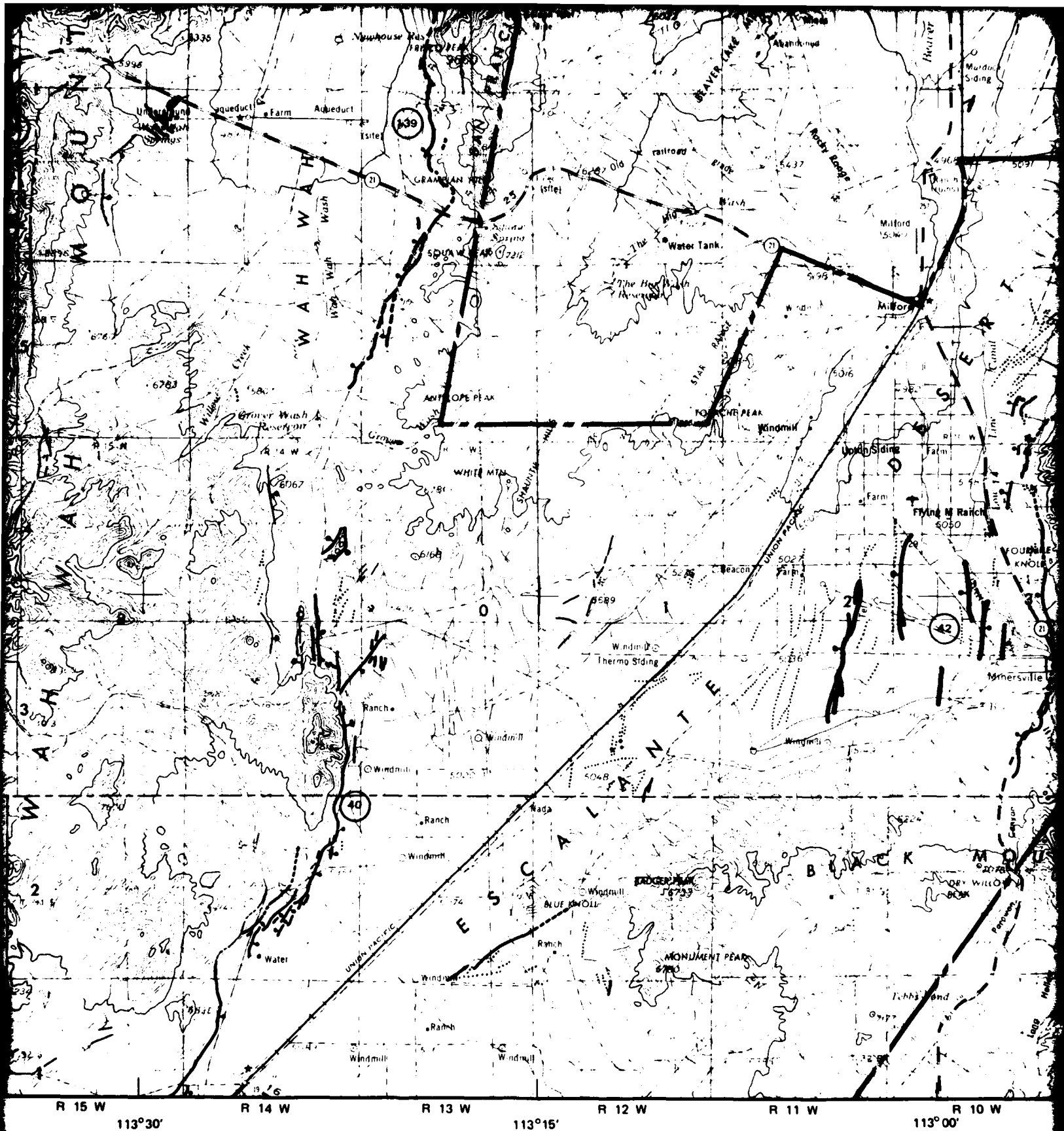
113°00' R 10 W 112°45' R 9 W 112°30' R 8 W R 7 W R 6 W R 5 W

NOTE: THIS MAP WAS PREPARED IN SUPPORT OF MX SHELTER DEPLOYMENT, CONSEQUENTLY THE FAULTS AND LINEAMENTS SHOWN ON THIS MAP ARE THE RESULT OF ANALYSIS ONLY WITHIN ALLUVIAL VALLEYS IN THE MX SITING REGION; MOUNTAIN RANGES WITHIN THE SITING REGION AND VALLEYS AND MOUNTAINS OUTSIDE OF THE REGION MAY CONTAIN YOUNG FAULTS NOT SHOWN ON THIS MAP.

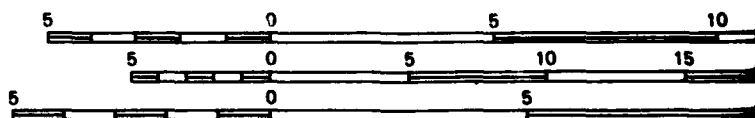








SCALE 1:250,000

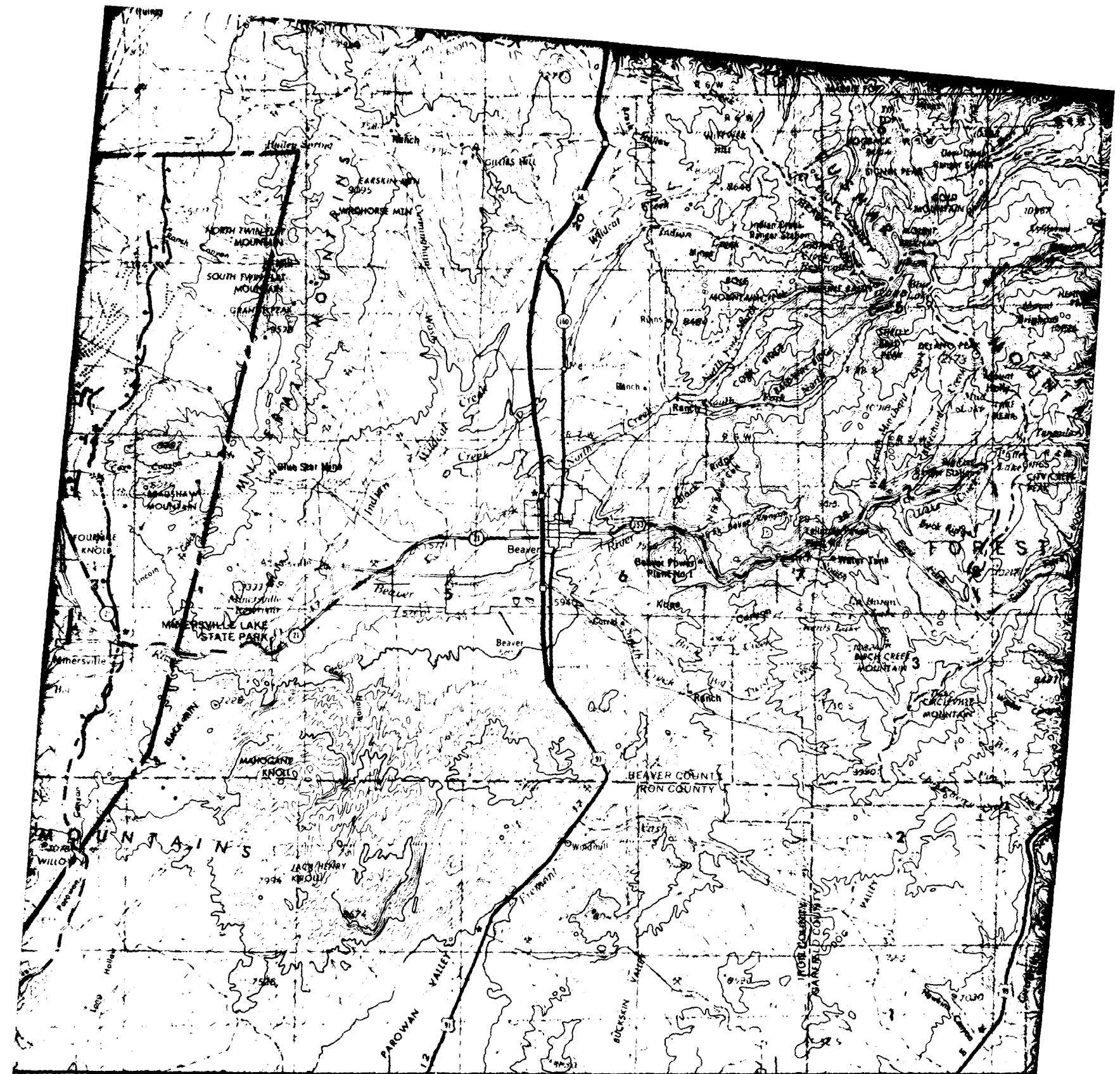


us fault scarp except for narrow drainage crossings where small  
d between more widely spaced scarps based on alignment of  
nt movement denoted by line width.

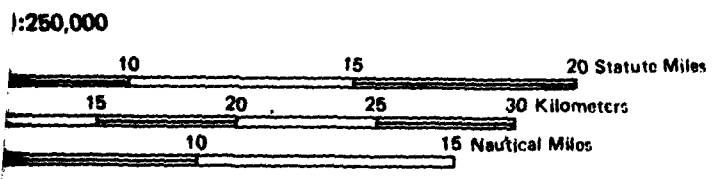
15,000 years):

CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FEET  
Data from U.S. Geological Survey, Richfield, Utah





R 10 W      R 9 W      R 8 W      R 7 W      R 6 W      R 5 W  
 112°45'      112°30'

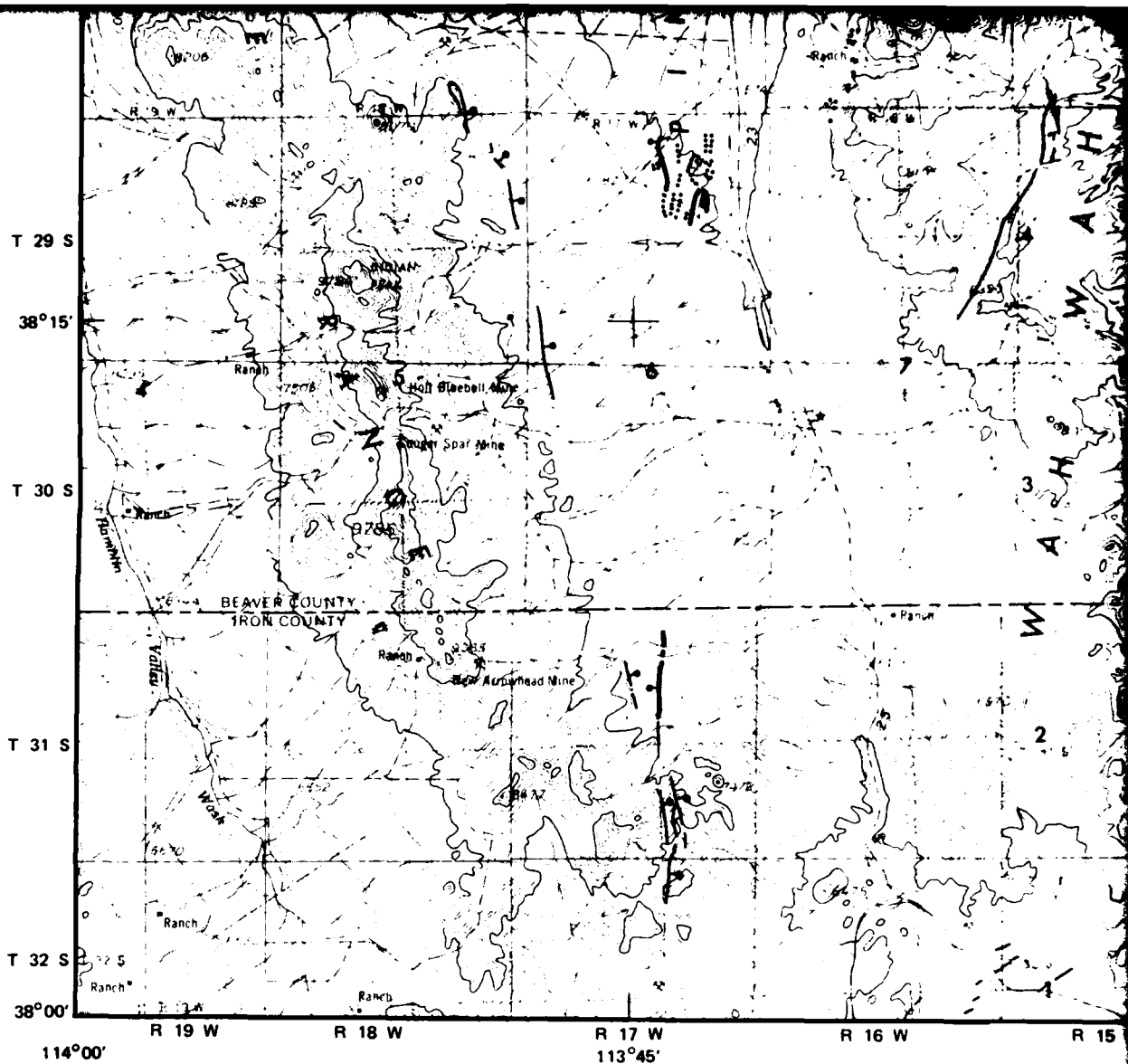


LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
 1° x 2° QUADRANGLES

CONTOUR INTERVAL 200 FEET  
 LINES AT 100 FOOT INTERVALS

120°					110°
41°	LOVELOCK	WINNEMUCCA	ELKO	TOOELE	SALT LAKE CITY
	RENO	MILLETT	ELY	DELTA	PRICE
	WALKER			BRIDGEMAN	SALINA
	NEVADA				UTAH





## EXPLANATION



**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp; portions of scarp are removed by erosion; dashed line indicates trace inferred between scarps and (or) presence of lineaments between the scarps. Age of most recent movement.



Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).



Pleistocene ( $\approx 15,000$  years to 1.8 million years).



Indeterminate; late Tertiary or younger, probably Quaternary. Scarps to lack of young stratigraphic units over trace of fault.

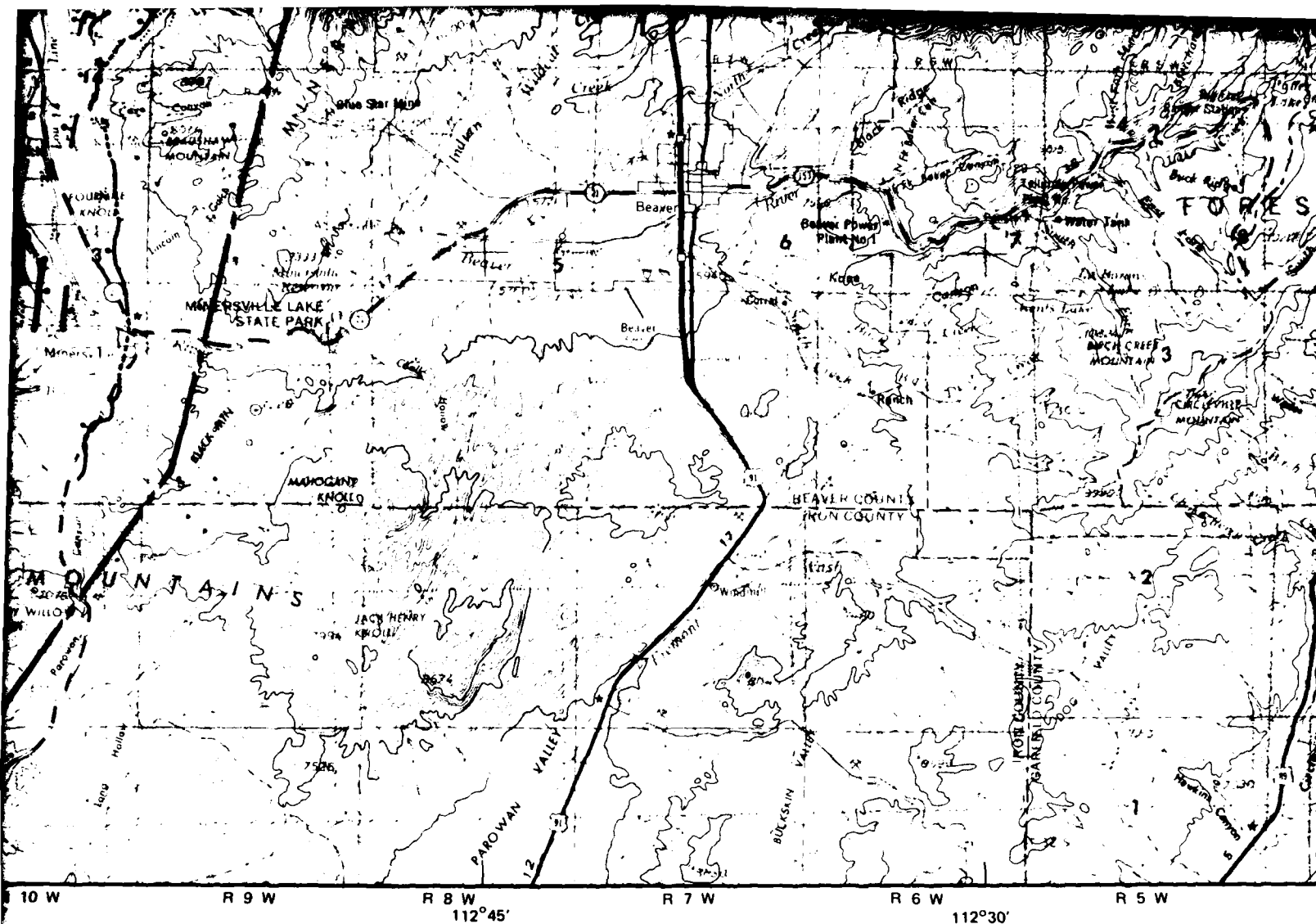


**LINEAMENT:** Vegetation alignments and tonal contrasts without topographic relief; but

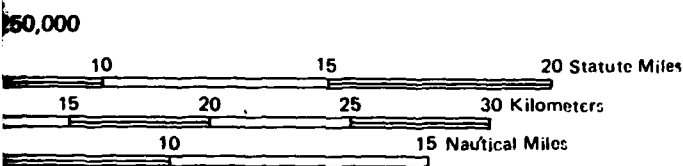


**APPROXIMATE BOUNDARY OF FAULT-STUDY REGION**

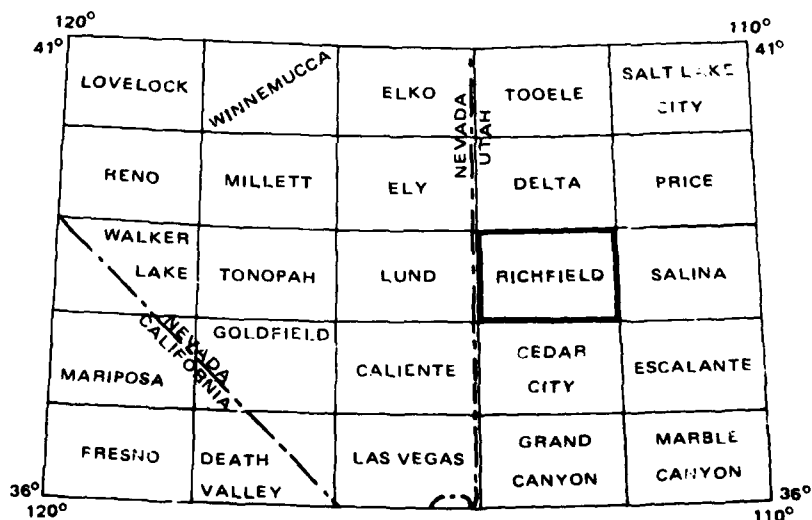


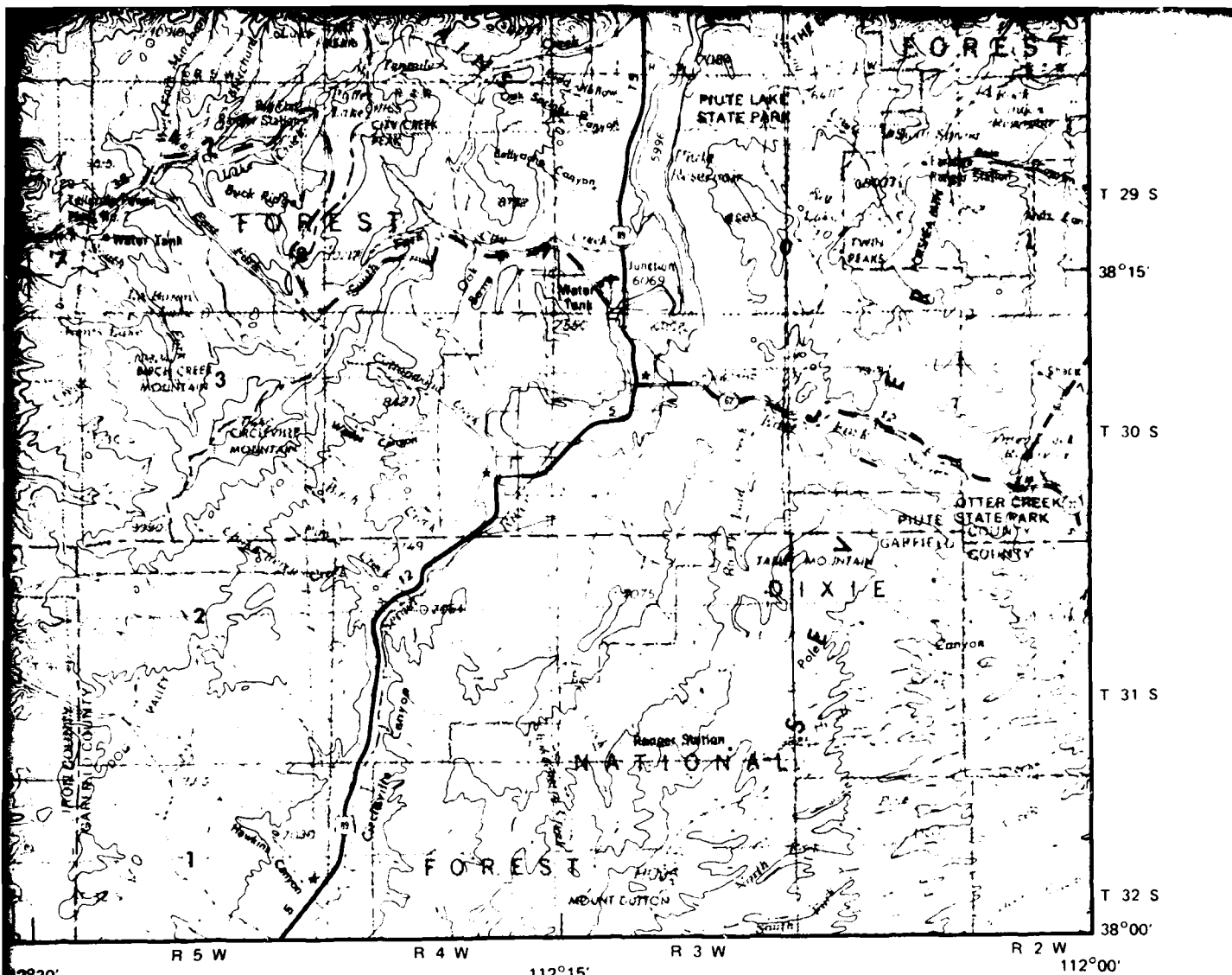


LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES



VAL 200 FEET  
IRS AT 100 FOOT INTERVALS  
hfield Quadrangle, Revised 1972,  
Mercator Projection





GEOLOGICAL SURVEY  
SANGLES

NEVADA	TOOELE	SALT LAKE CITY
	DELTA	PRICE
UTAH	RICHFIELD	SALINA
W	CEDAR CITY	ESCALANTE
AS	GRAND CANYON	MARBLE CANYON

**Ertec**  
The Earth Technology Corporation

MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX

**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEAMENTS, MX SITING REGION  
RICHFIELD 1°x 2° QUADRANGLE, UTAH  
PLATE A5**

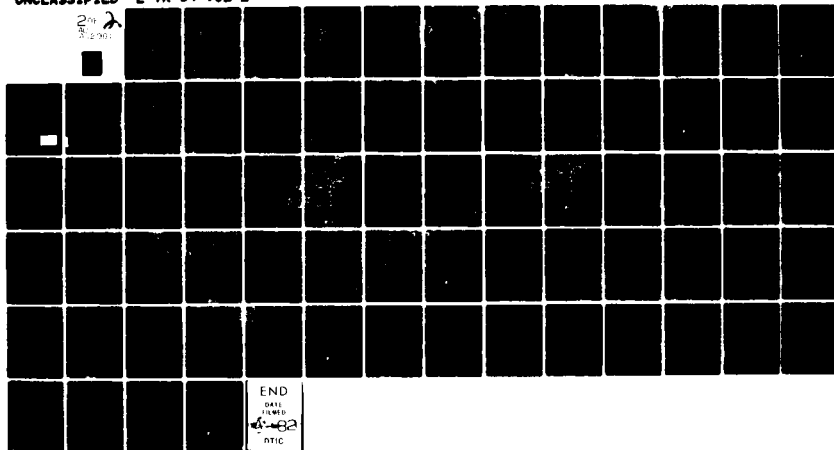
AD-A112 961

ERTEC WESTERN INC LONG BEACH CA  
MX SITING INVESTIGATION. FAULTS AND LINEAMENTS IN THE MX SITING--ETC(U)  
NOV 81  
F04704-88-C-0006  
NL

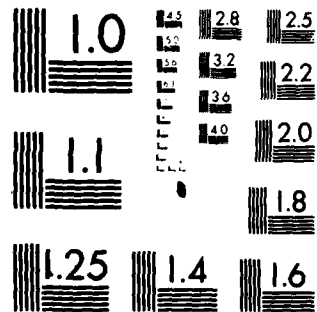
UNCLASSIFIED

E-TR-54-VOL-2

20  
2001

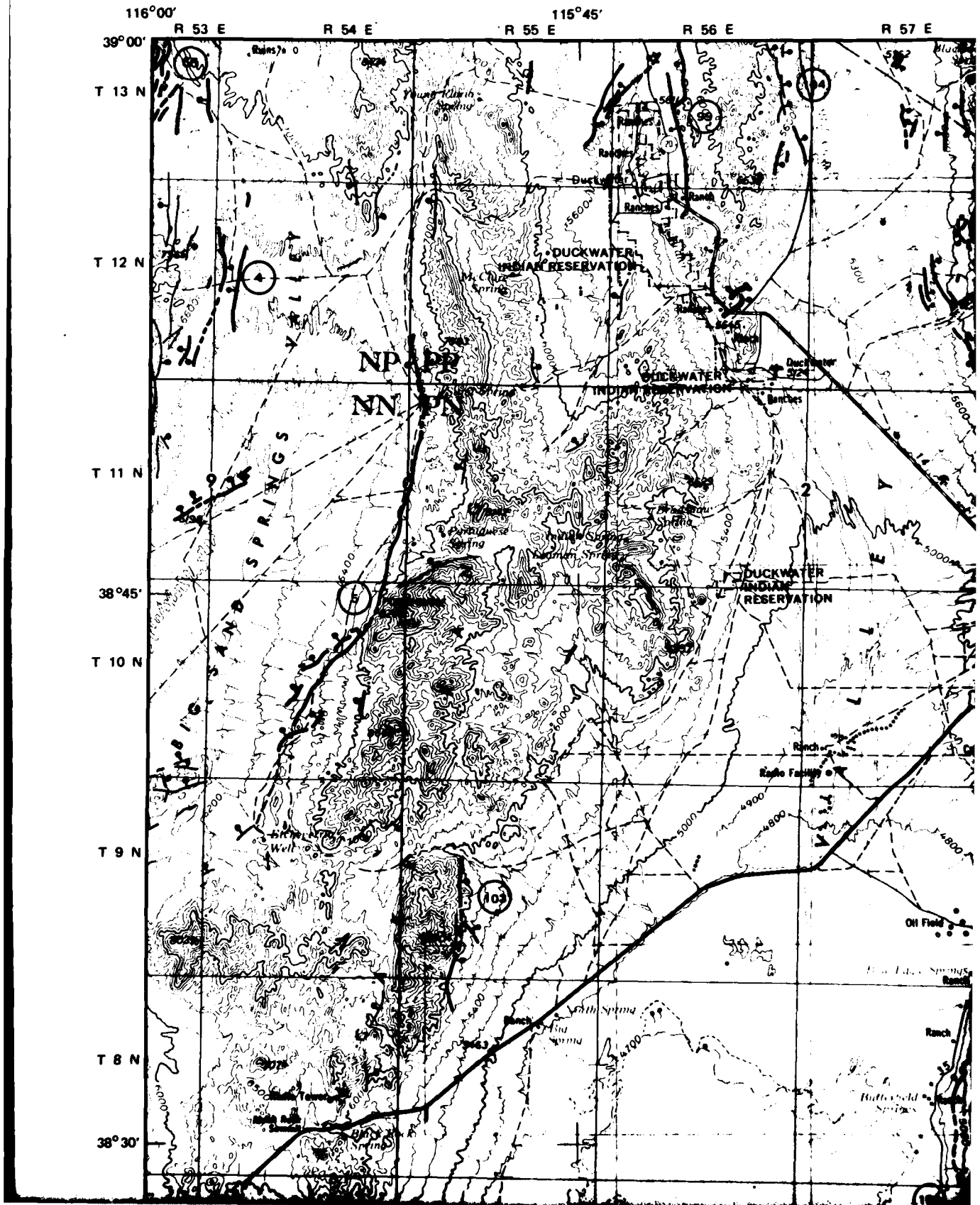


A microcopy resolution test chart featuring various patterns of horizontal and vertical lines. Each pattern is accompanied by a numerical value indicating the resolution. The values are arranged in a grid-like fashion, with some values appearing in a vertical column in the center. The values include 1.0, 1.1, 1.25, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10.0, 11.2, 12.5, 14.0, 16.0, 18.0, 20.0, 22.5, 25.0, 28.0, 32.0, 36.0, 40.0, 45.0, 50.0, 56.0, 63.0, 71.0, 80.0, 90.0, 100.0, 112.0, 125.0, 140.0, 160.0, 180.0, 200.0, 225.0, 250.0, 280.0, 320.0, 360.0, 400.0, 450.0, 500.0, 560.0, 630.0, 710.0, 800.0, 900.0, 1000.0, 1120.0, 1250.0, 1400.0, 1600.0, 1800.0, 2000.0, 2250.0, 2500.0, 2800.0, 3200.0, 3600.0, 4000.0, 4500.0, 5000.0, 5600.0, 6300.0, 7100.0, 8000.0, 9000.0, 10000.0, 11200.0, 12500.0, 14000.0, 16000.0, 18000.0, 20000.0, 22500.0, 25000.0, 28000.0, 32000.0, 36000.0, 40000.0, 45000.0, 50000.0, 56000.0, 63000.0, 71000.0, 80000.0, 90000.0, 100000.0, 112000.0, 125000.0, 140000.0, 160000.0, 180000.0, 200000.0, 225000.0, 250000.0, 280000.0, 320000.0, 360000.0, 400000.0, 450000.0, 500000.0, 560000.0, 630000.0, 710000.0, 800000.0, 900000.0, 1000000.0, 1120000.0, 1250000.0, 1400000.0, 1600000.0, 1800000.0, 2000000.0, 2250000.0, 2500000.0, 2800000.0, 3200000.0, 3600000.0, 4000000.0, 4500000.0, 5000000.0, 5600000.0, 6300000.0, 7100000.0, 8000000.0, 9000000.0, 10000000.0, 11200000.0, 12500000.0, 14000000.0, 16000000.0, 18000000.0, 20000000.0, 22500000.0, 25000000.0, 28000000.0, 32000000.0, 36000000.0, 40000000.0, 45000000.0, 50000000.0, 56000000.0, 63000000.0, 71000000.0, 80000000.0, 90000000.0, 100000000.0, 112000000.0, 125000000.0, 140000000.0, 160000000.0, 180000000.0, 200000000.0, 225000000.0, 250000000.0, 280000000.0, 320000000.0, 360000000.0, 400000000.0, 450000000.0, 500000000.0, 560000000.0, 630000000.0, 710000000.0, 800000000.0, 900000000.0, 1000000000.0, 1120000000.0, 1250000000.0, 1400000000.0, 1600000000.0, 1800000000.0, 2000000000.0, 2250000000.0, 2500000000.0, 2800000000.0, 3200000000.0, 3600000000.0, 4000000000.0, 4500000000.0, 5000000000.0, 5600000000.0, 6300000000.0, 7100000000.0, 8000000000.0, 9000000000.0, 10000000000.0, 11200000000.0, 12500000000.0, 14000000000.0, 16000000000.0, 18000000000.0, 20000000000.0, 22500000000.0, 25000000000.0, 28000000000.0, 32000000000.0, 36000000000.0, 40000000000.0, 45000000000.0, 50000000000.0, 56000000000.0, 63000000000.0, 71000000000.0, 80000000000.0, 90000000000.0, 100000000000.0, 112000000000.0, 125000000000.0, 140000000000.0, 160000000000.0, 180000000000.0, 200000000000.0, 225000000000.0, 250000000000.0, 280000000000.0, 320000000000.0, 360000000000.0, 400000000000.0, 450000000000.0, 500000000000.0, 560000000000.0, 630000000000.0, 710000000000.0, 800000000000.0, 900000000000.0, 1000000000000.0, 1120000000000.0, 1250000000000.0, 1400000000000.0, 1600000000000.0, 1800000000000.0, 2000000000000.0, 2250000000000.0, 2500000000000.0, 2800000000000.0, 3200000000000.0, 3600000000000.0, 4000000000000.0, 4500000000000.0, 5000000000000.0, 5600000000000.0, 6300000000000.0, 7100000000000.0, 8000000000000.0, 9000000000000.0, 10000000000000.0, 11200000000000.0, 12500000000000.0, 14000000000000.0, 16000000000000.0, 18000000000000.0, 20000000000000.0, 22500000000000.0, 25000000000000.0, 28000000000000.0, 32000000000000.0, 36000000000000.0, 40000000000000.0, 45000000000000.0, 50000000000000.0, 56000000000000.0, 63000000000000.0, 71000000000000.0, 80000000000000.0, 90000000000000.0, 100000000000000.0, 112000000000000.0, 125000000000000.0, 140000000000000.0, 160000000000000.0, 180000000000000.0, 200000000000000.0, 225000000000000.0, 250000000000000.0, 280000000000000.0, 320000000000000.0, 360000000000000.0, 400000000000000.0, 450000000000000.0, 500000000000000.0, 560000000000000.0, 630000000000000.0, 710000000000000.0, 800000000000000.0, 900000000000000.0, 1000000000000000.0, 1120000000000000.0, 1250000000000000.0, 1400000000000000.0, 1600000000000000.0, 1800000000000000.0, 2000000000000000.0, 2250000000000000.0, 2500000000000000.0, 2800000000000000.0, 3200000000000000.0, 3600000000000000.0, 4000000000000000.0, 4500000000000000.0, 5000000000000000.0, 5600000000000000.0, 6300000000000000.0, 7100000000000000.0, 8000000000000000.0, 9000000000000000.0, 1000000000000



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS 1963 A





R 57 E

115°30'

R 58 E

R 59 E

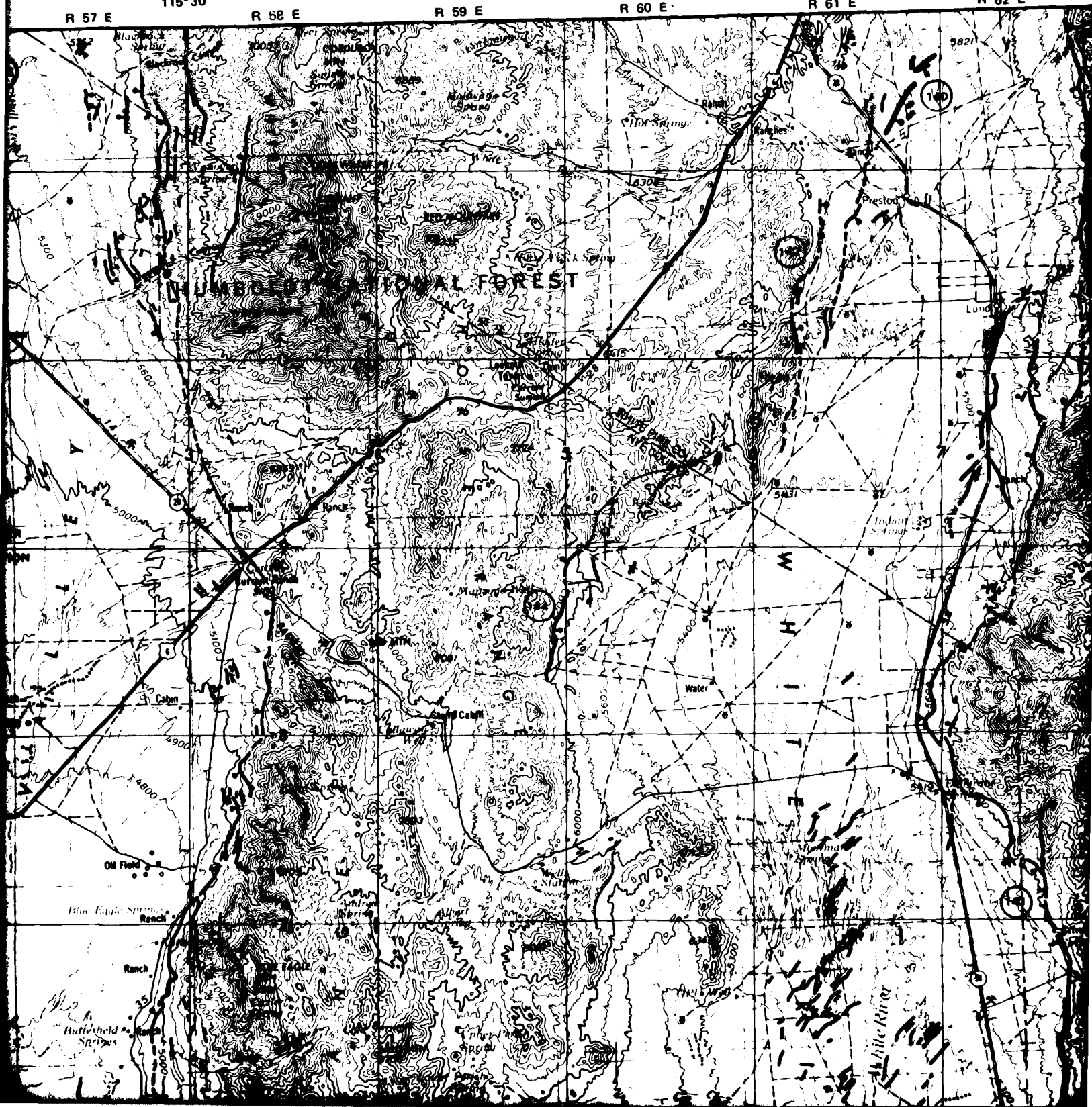
115°15'

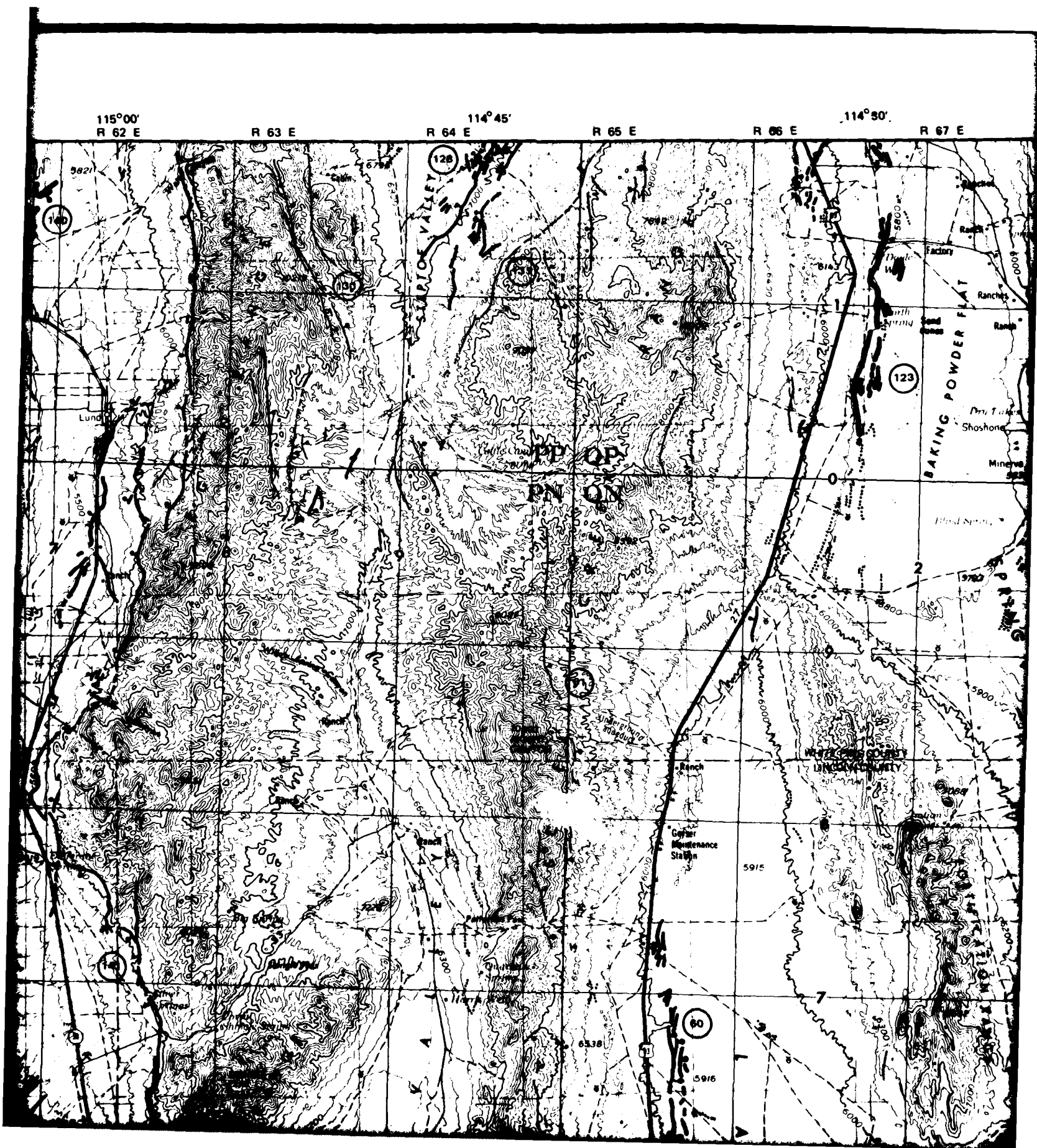
R 60 E

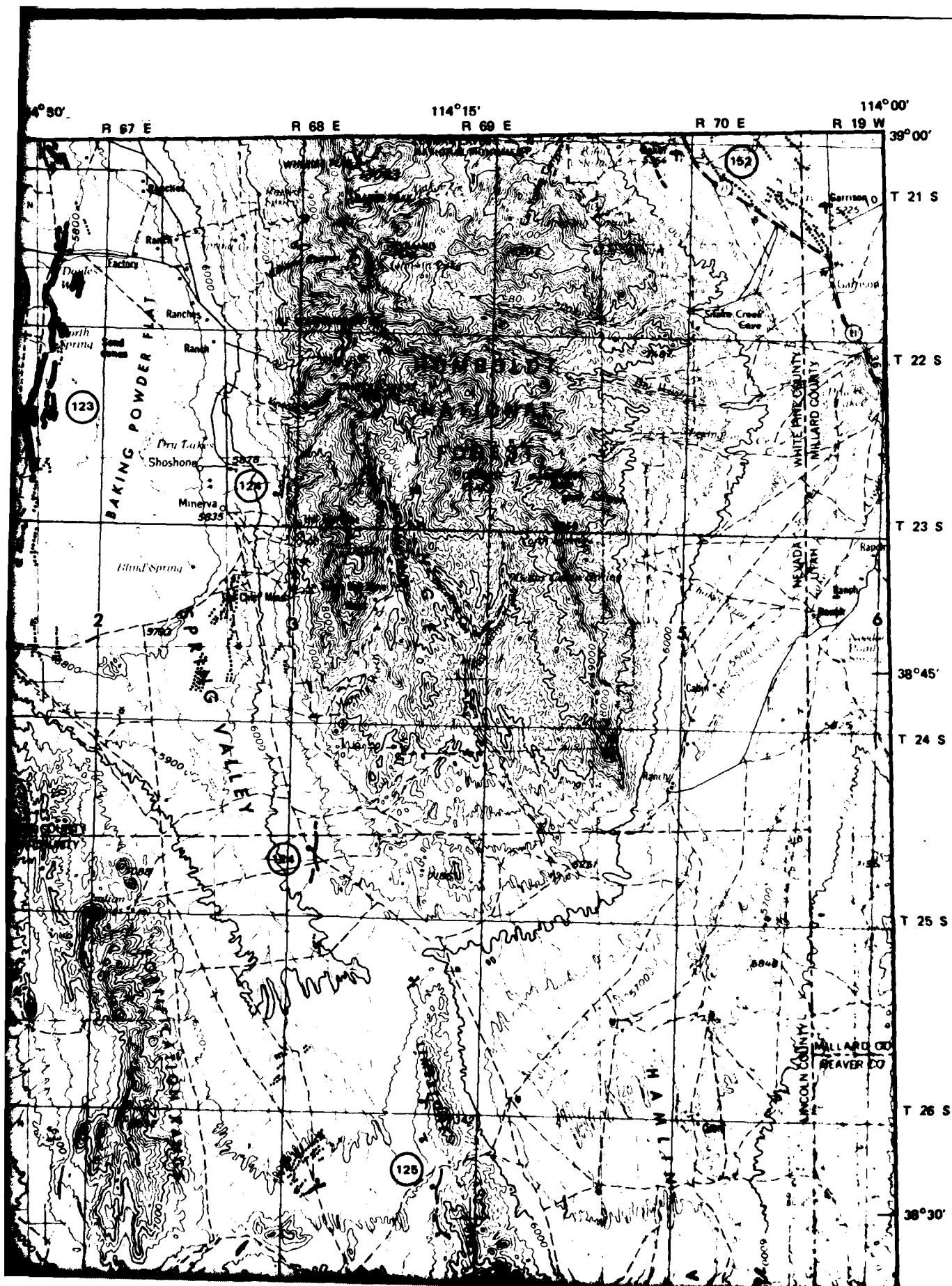
R 61 E

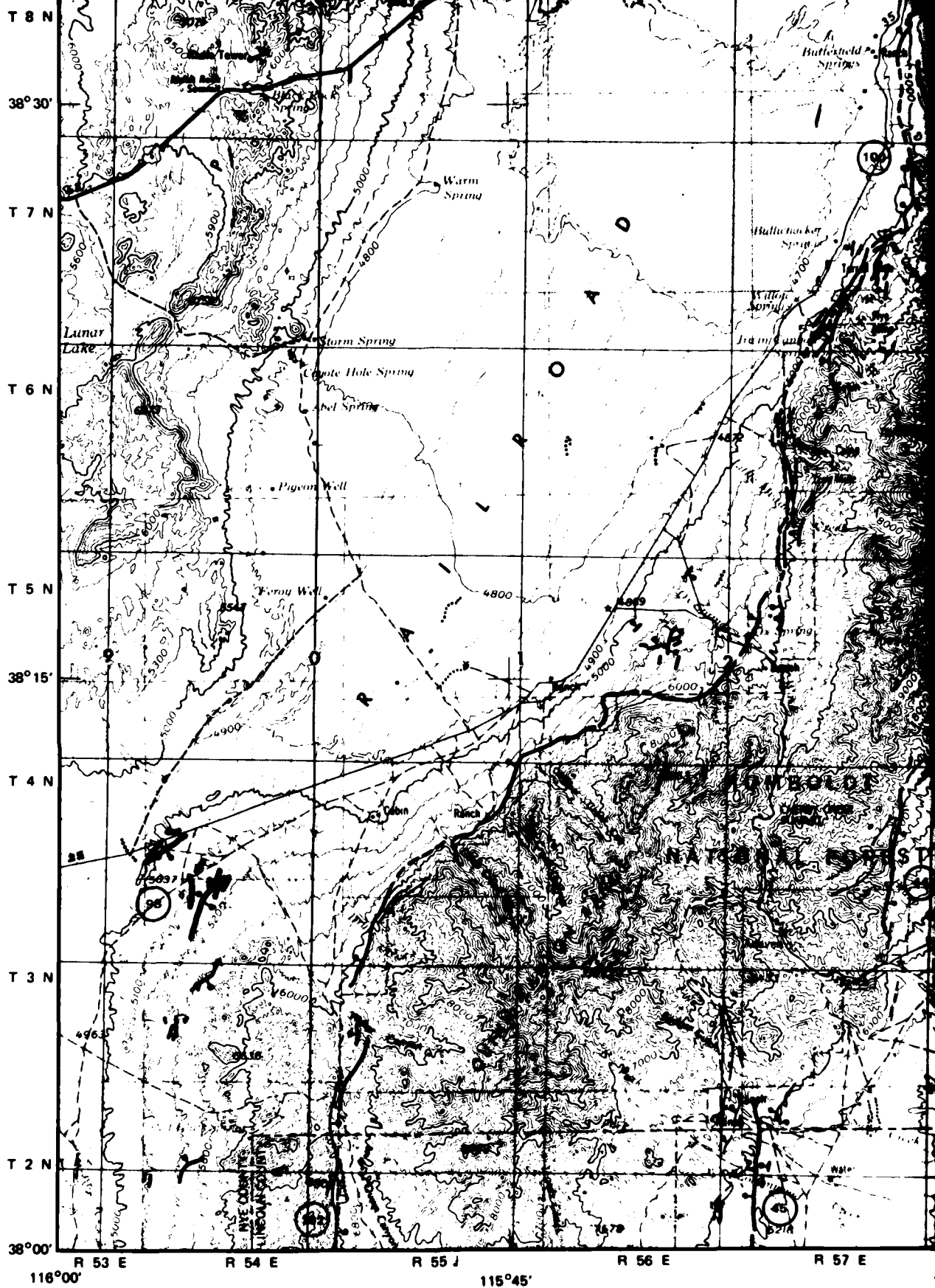
115°00'

R 62 E







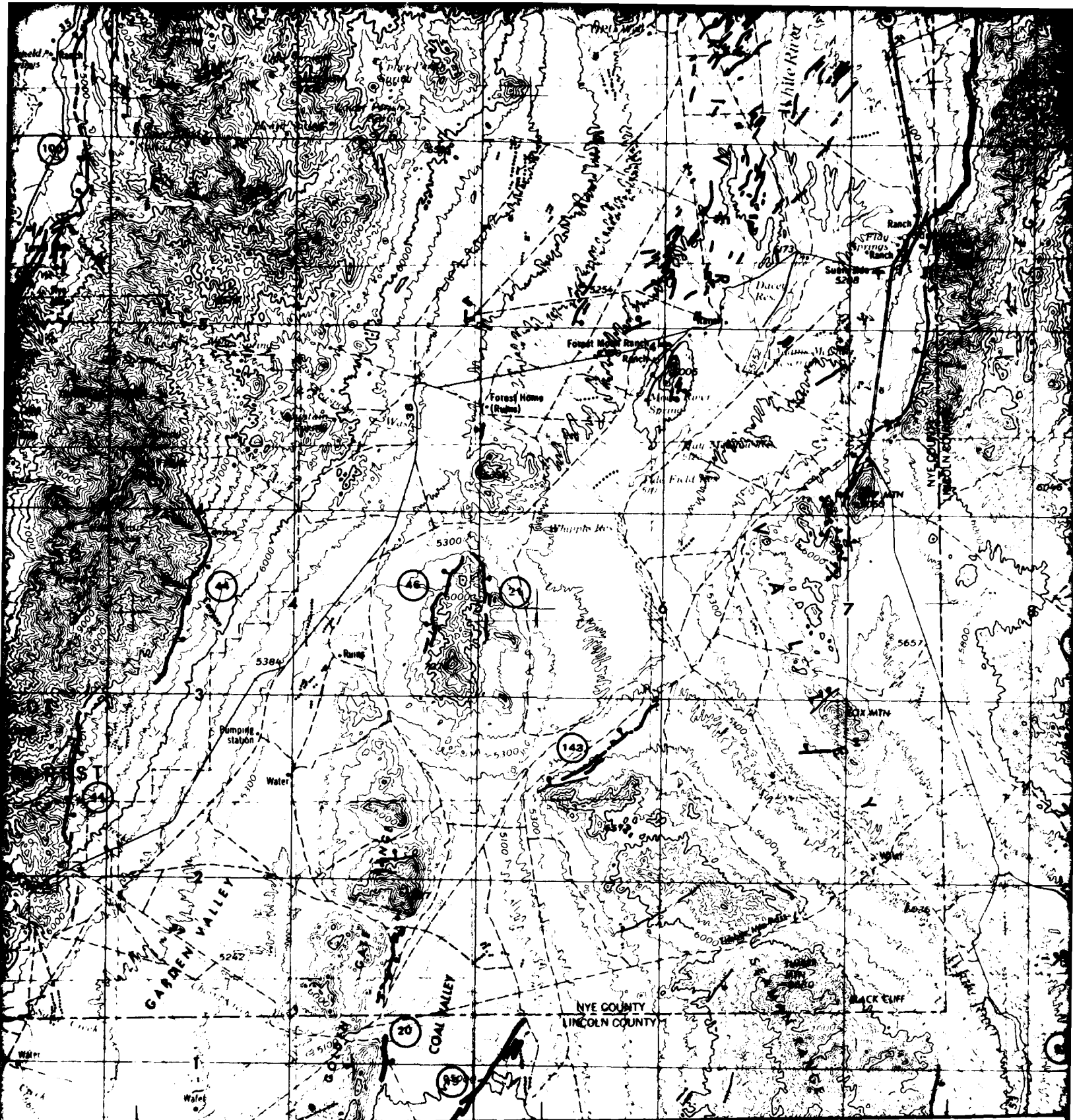


## EXPLANATION



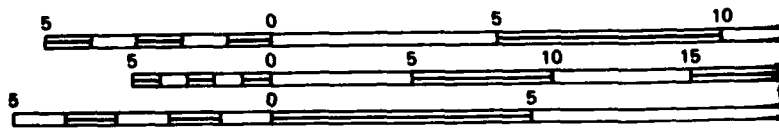
**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp or portions of scarp are removed by erosion; dashed line indicates trace inferred between most scarps and (or) presence of lineaments between the scarps. Age of most recent movement of





R 57 E 115° 30' R 58 E R 59 E R 60 E 115° 15' R 61 E R 62 E 115° 00'

SCALE 1:250,000



use fault scarp except for narrow drainage crossings where small  
ed between more widely spaced scarps based on alignment of  
ent movement denoted by line width.

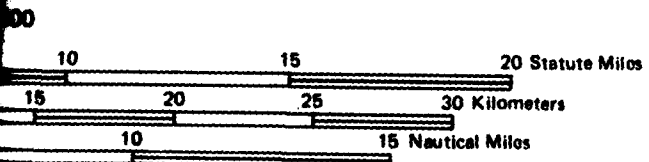
CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FO  
Base from U.S. Geological Survey, Lund Quadran



R 63 E      R 64 E      R 65 E      R 66 E      R 67 E      R 68 E

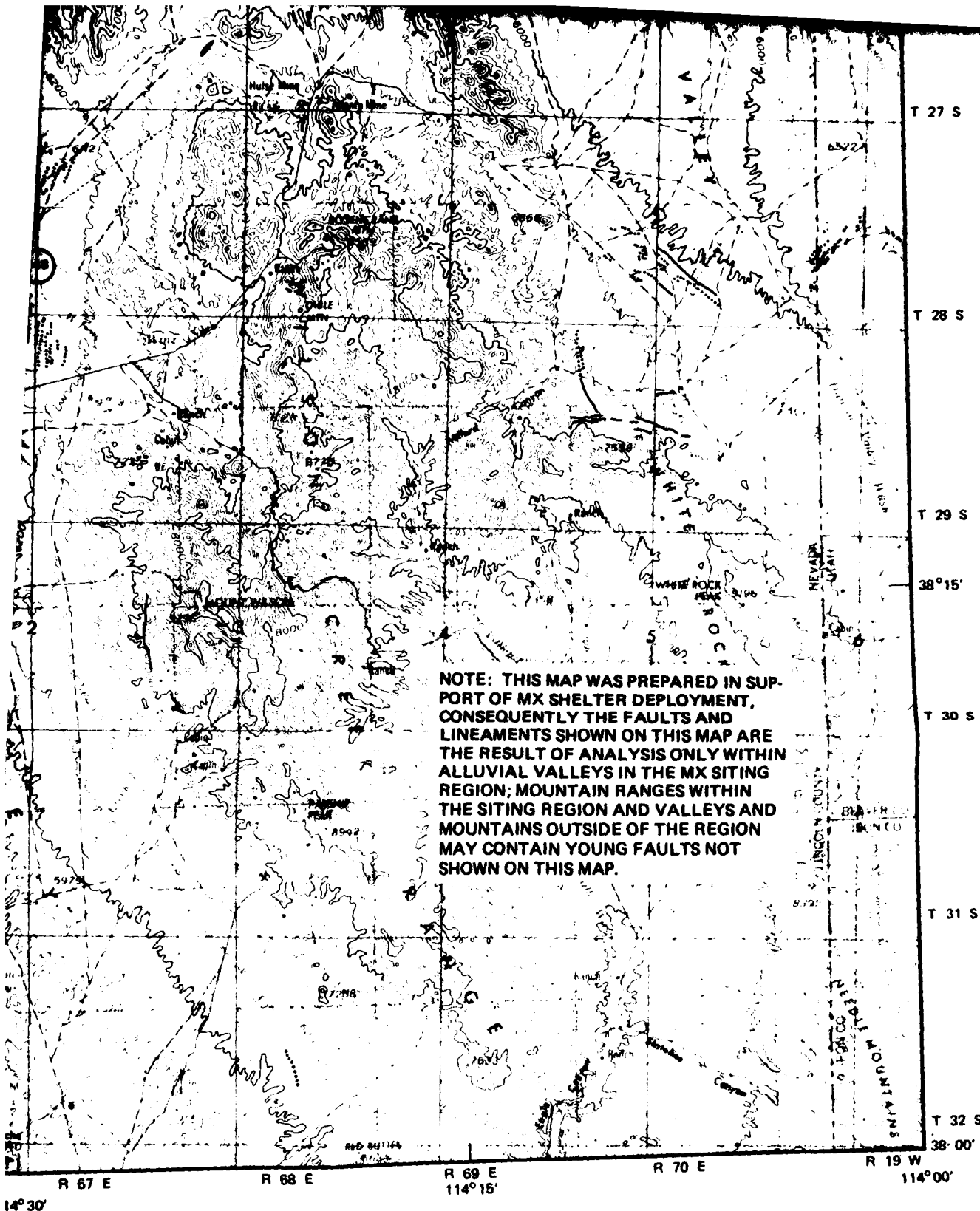
114°45'      114°30'

LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES



1:200 FEET  
AT 100 FOOT INTERVALS

120°					110°	
41°	LOVELOCK	WINNEMUCCA	ELKO	TOOELE	SALT LAKE CITY	41°
	RENO	MILLETT	ELY	DELTA	PRICE	



GEOLOGICAL SURVEY  
ANGLES

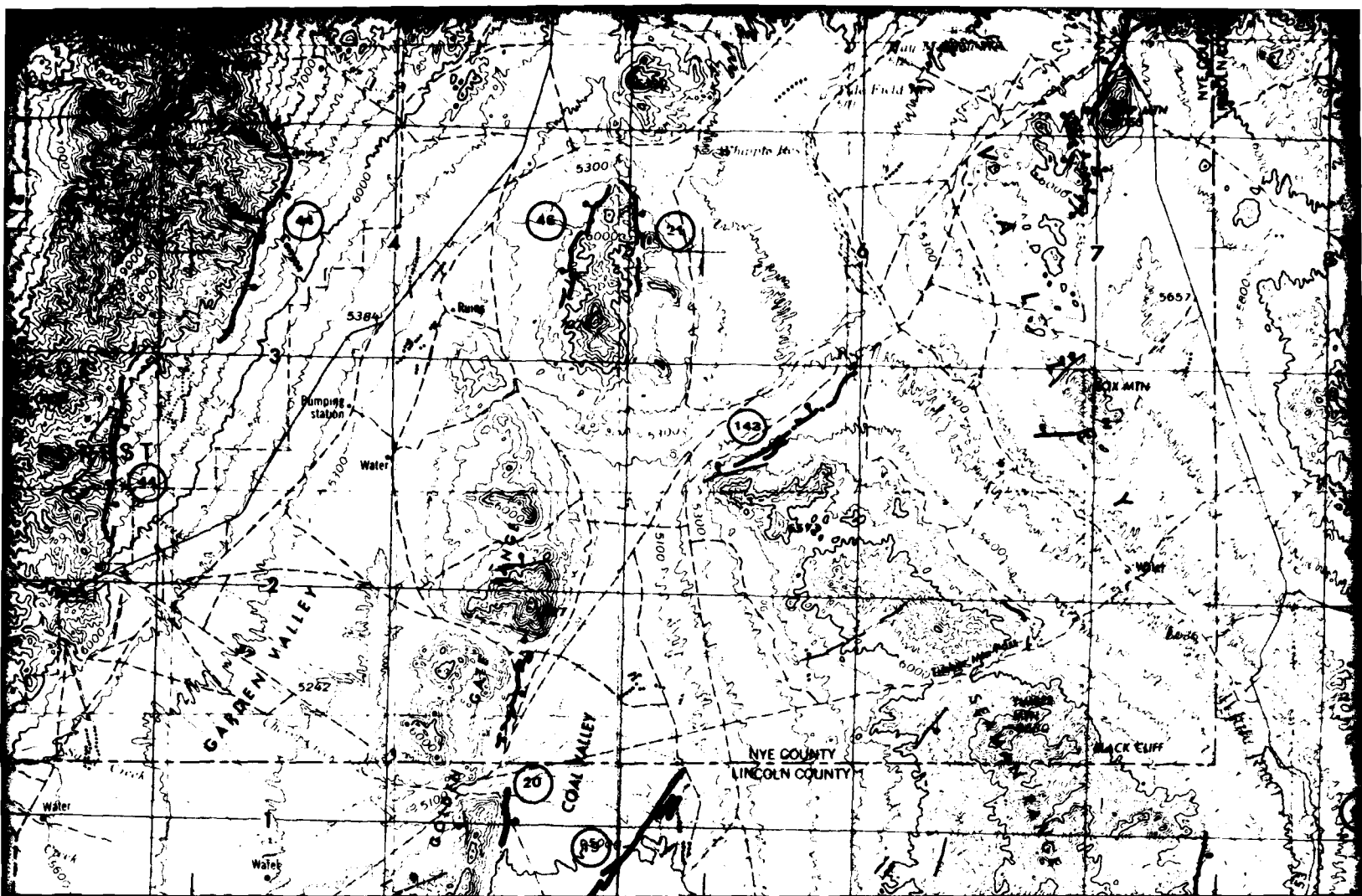
NEVADA UTAH	TOOELE	SALT LAKE CITY
	DELTA	PRICE



MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/ACDCE MX

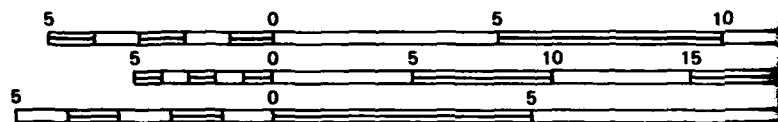






R 57 E 115°30' R 58 E R 59 E R 60 E 115°15' R 61 E R 62 E 115°00'

SCALE 1:250,000



ous fault scarp except for narrow drainage crossings where small  
red between more widely spaced scarps based on alignment of  
cent movement denoted by line width.

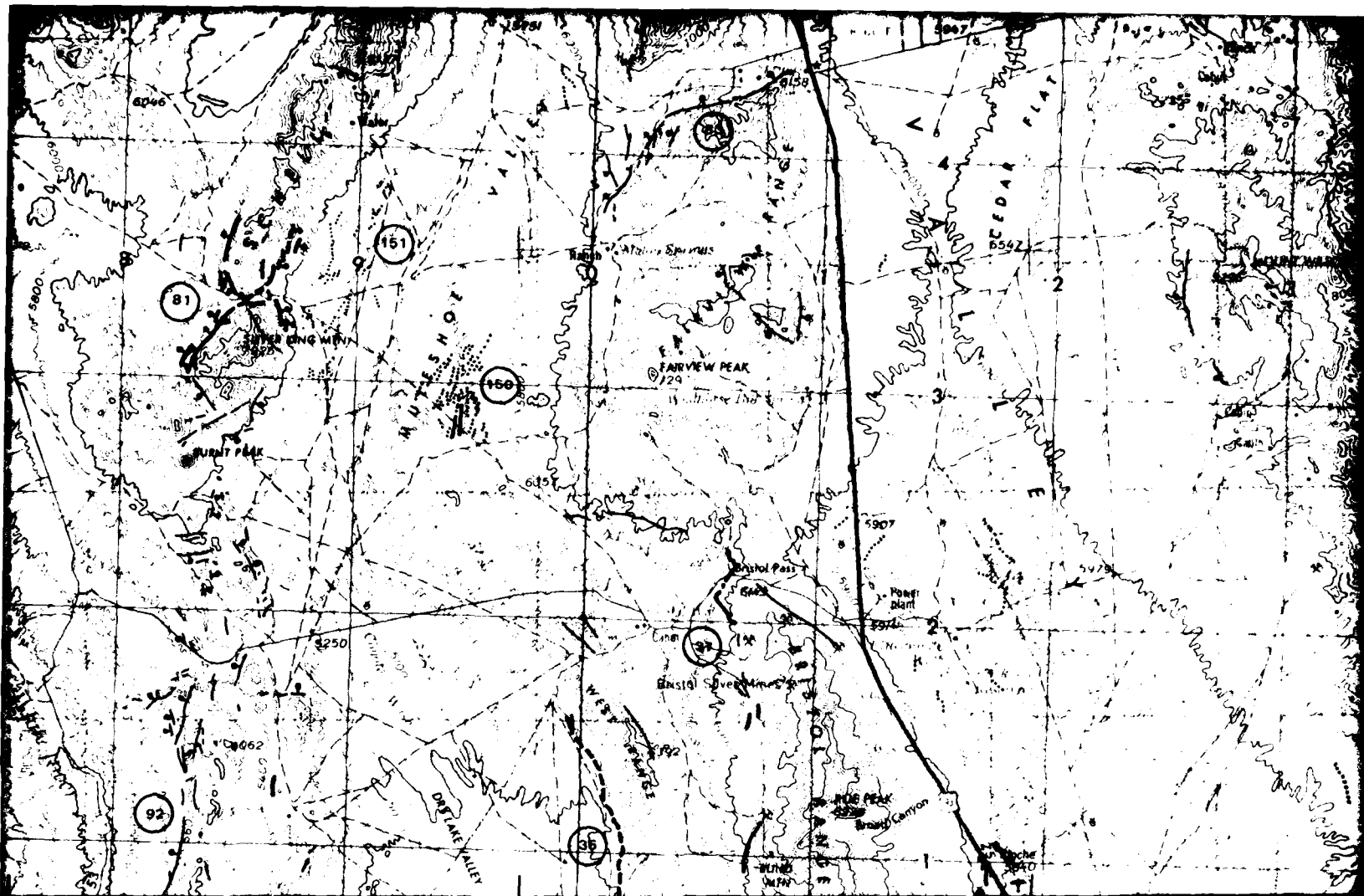
(15,000 years).

CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FEET  
Base from U.S. Geological Survey, Lund Quadrangle  
1:250,000, Transverse Mercator Projection

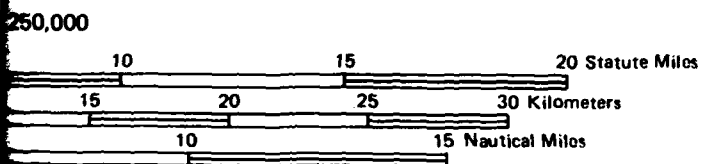
ary. Scarps are prominent but age cannot be determined due

phic relief; believed to be faults or fault-related cracks.



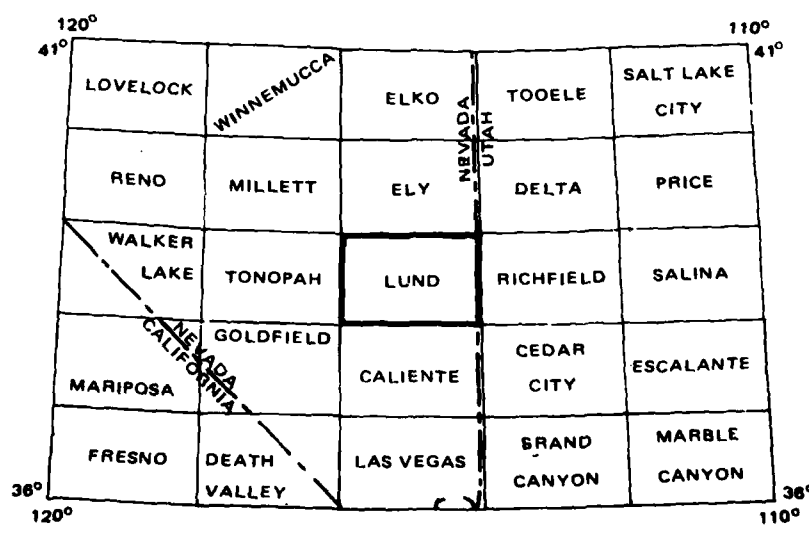


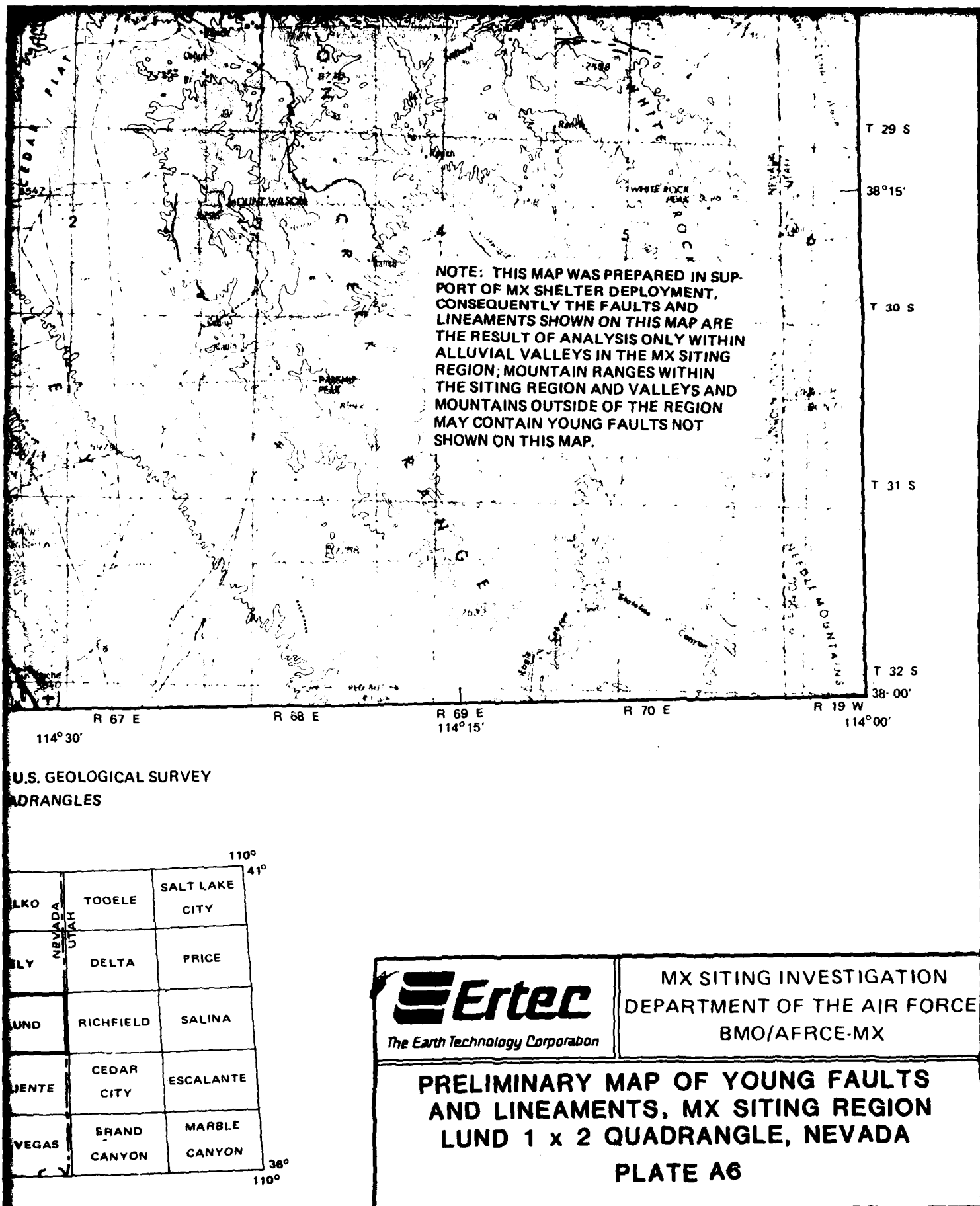
2 E 00' R 63 E R 64 E R 65 E R 66 E R 67 E R 68 114° 45' 114° 30'

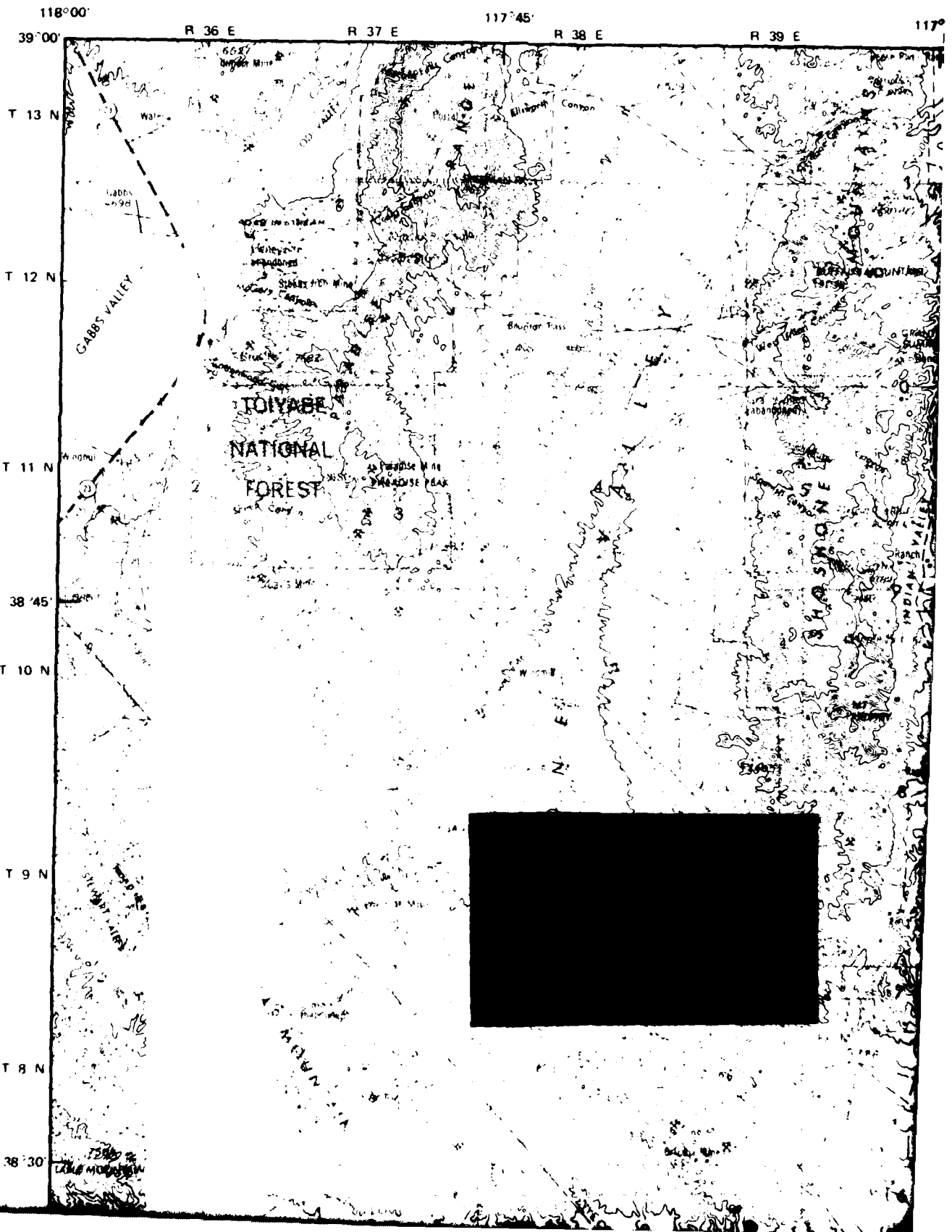


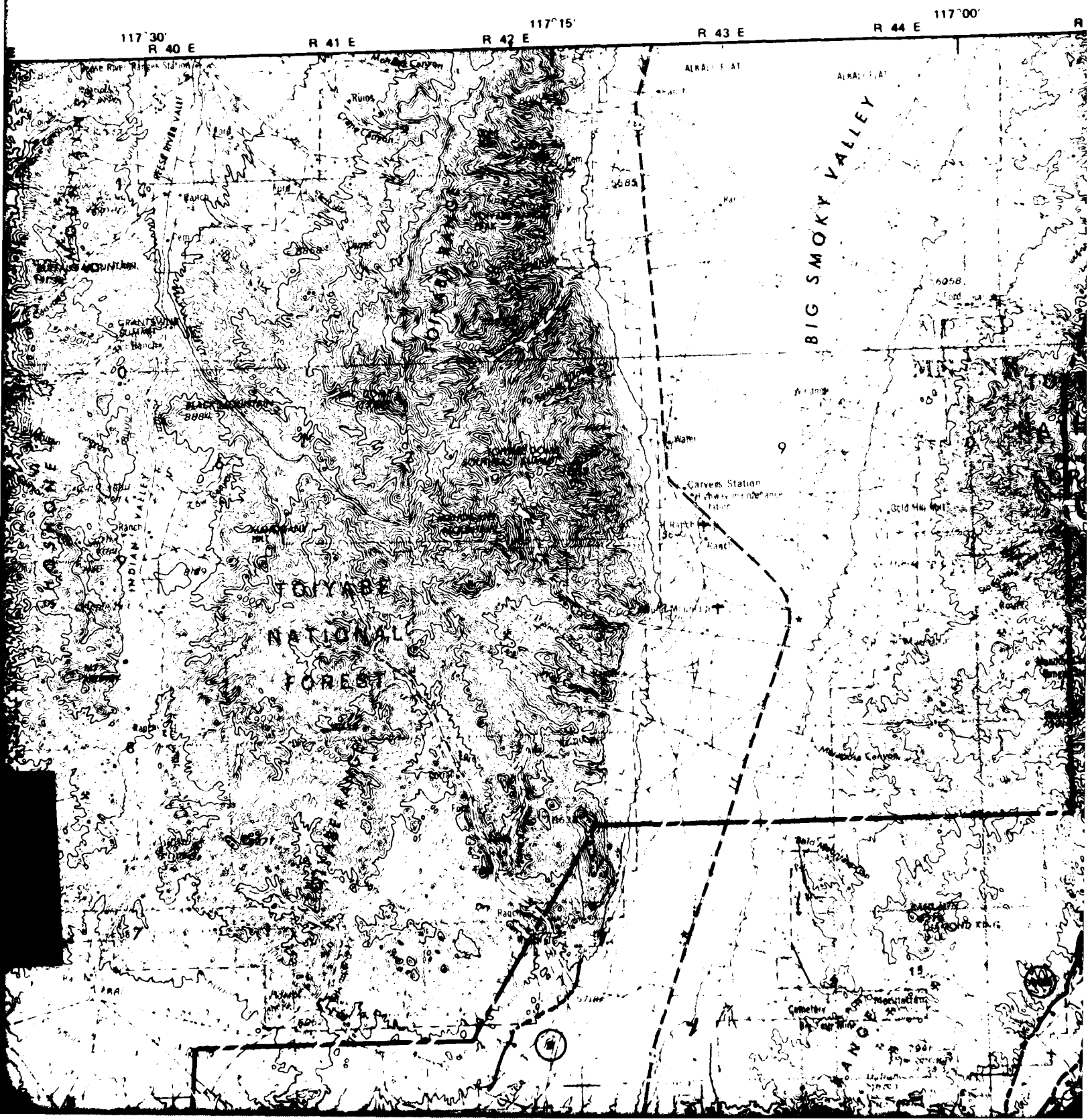
LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES

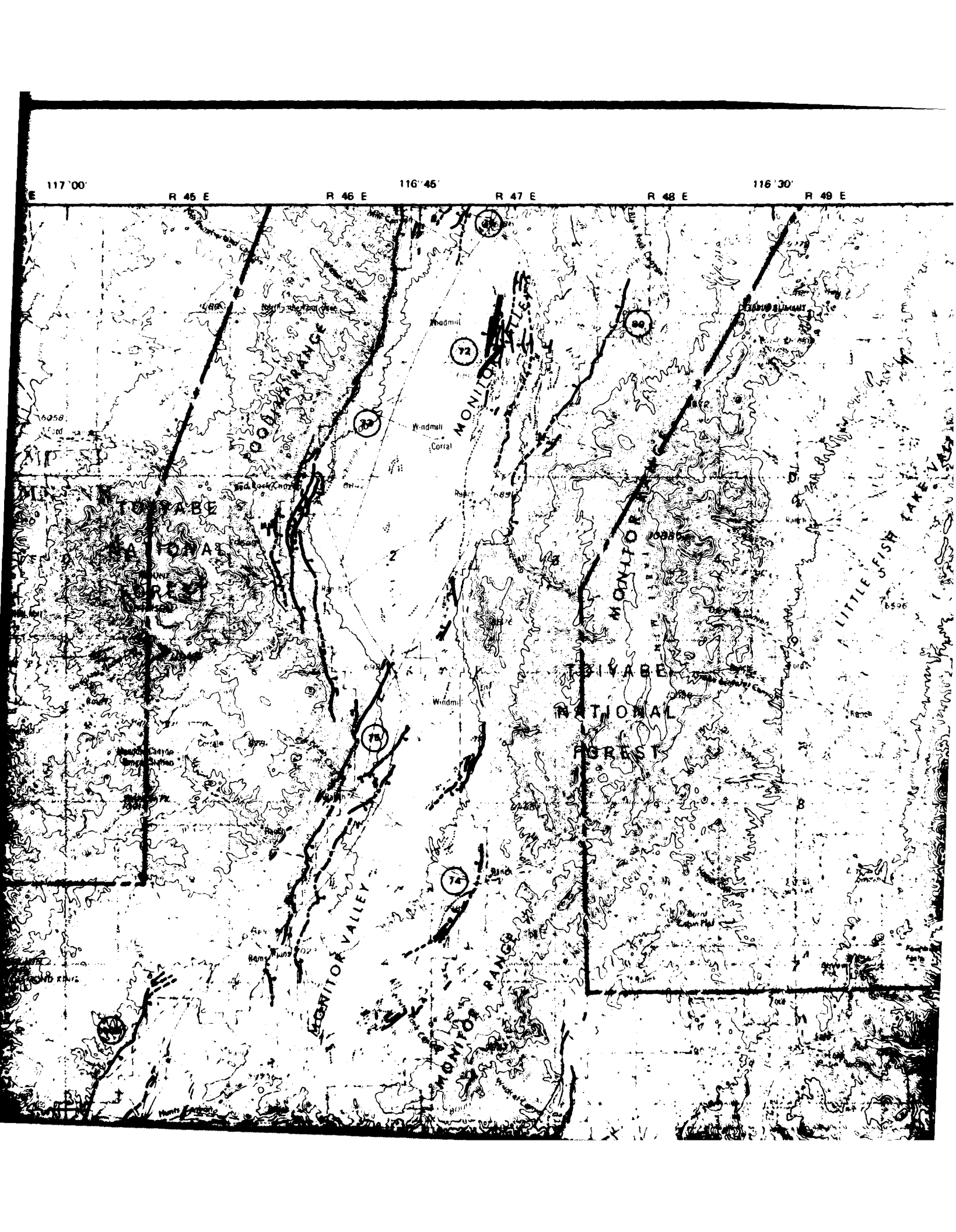
VAL 200 FEET  
URS AT 100 FOOT INTERVALS  
Lund Quadrangle, Revised 1971  
Mercator Projection



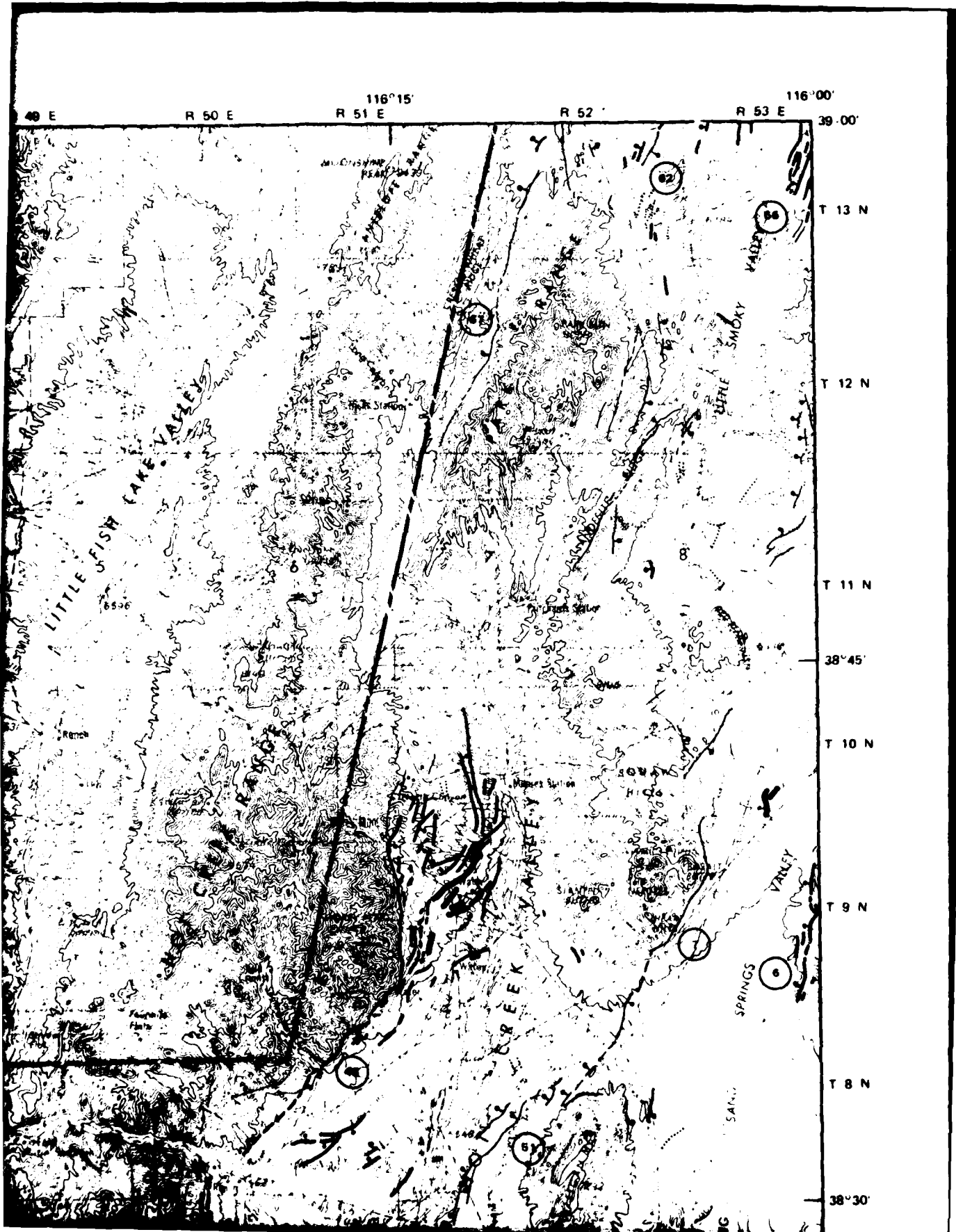




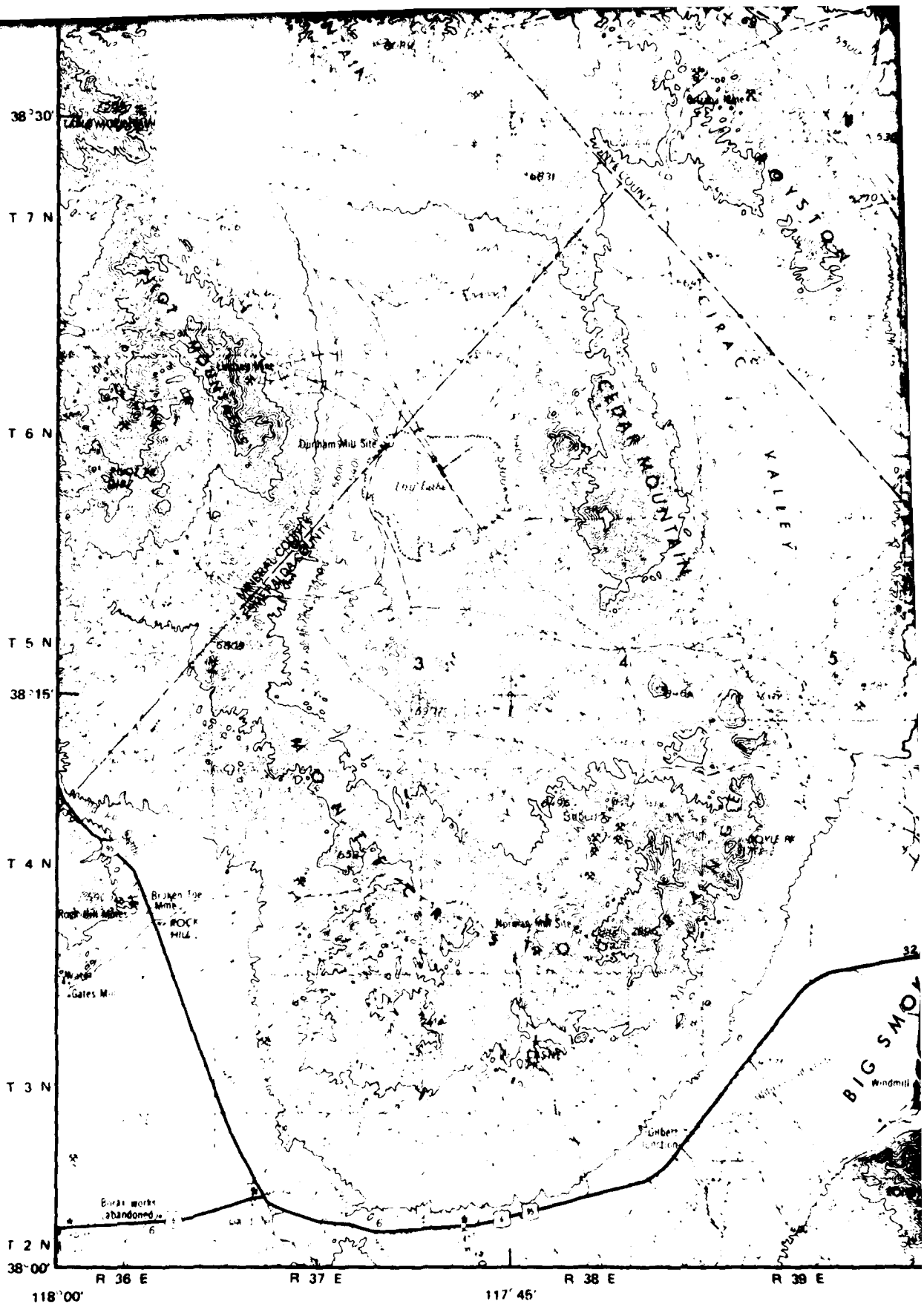




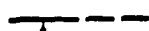








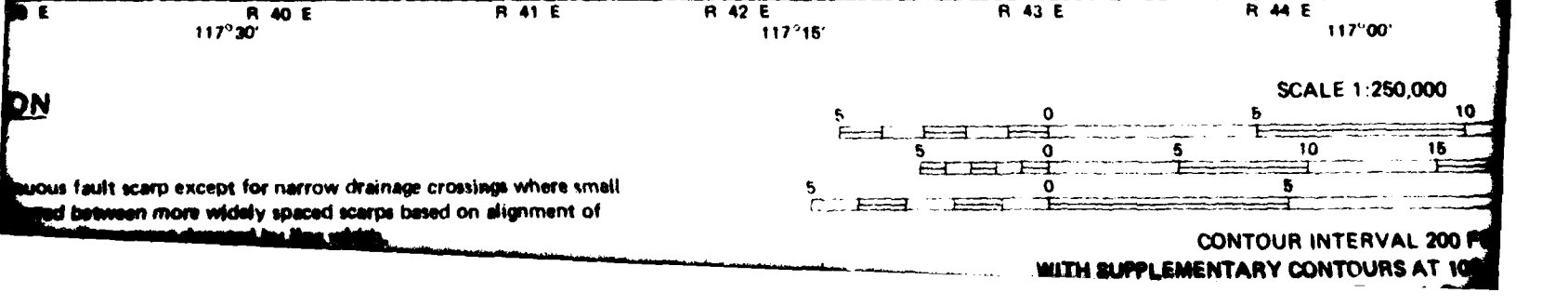
## EXPLANATION

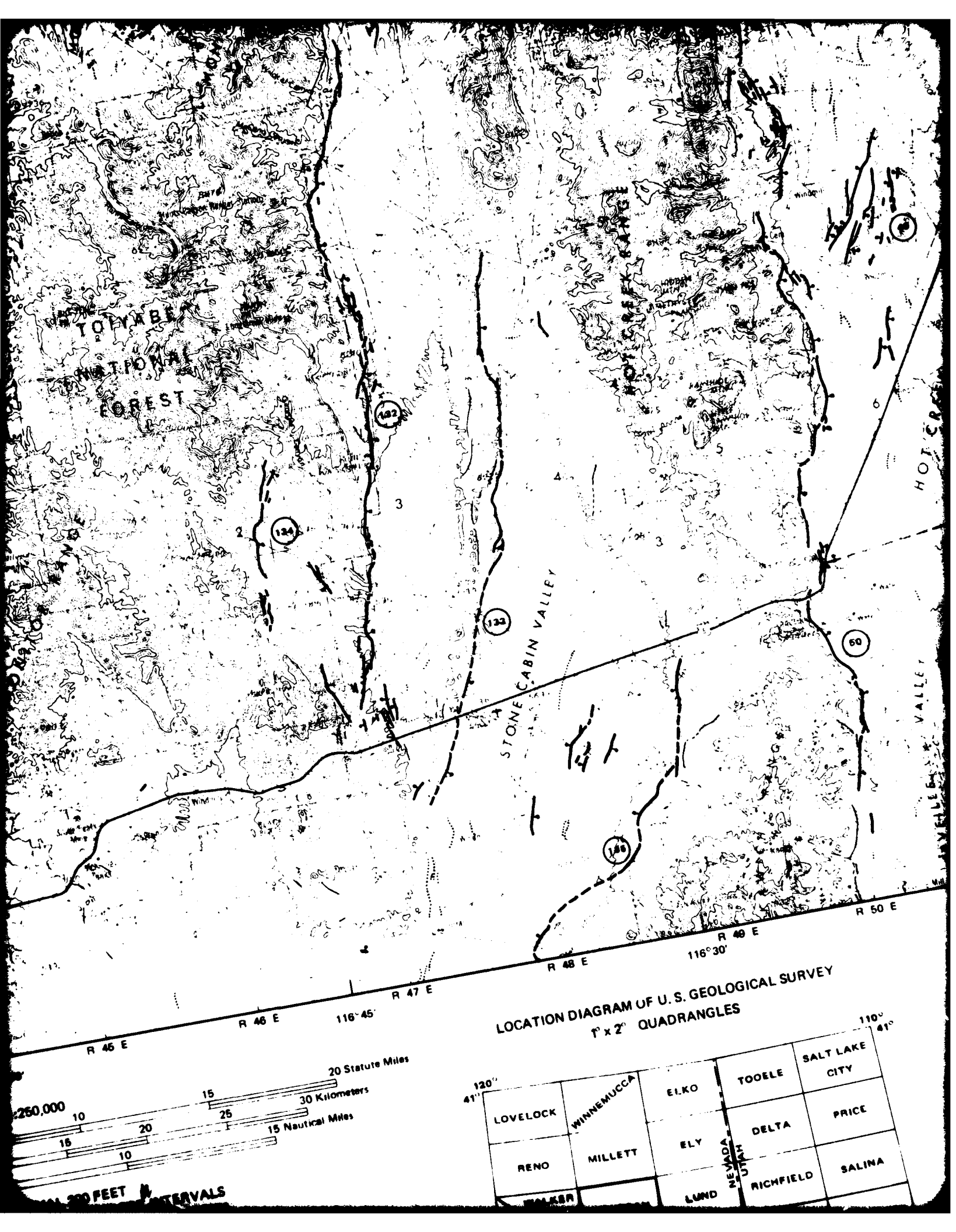


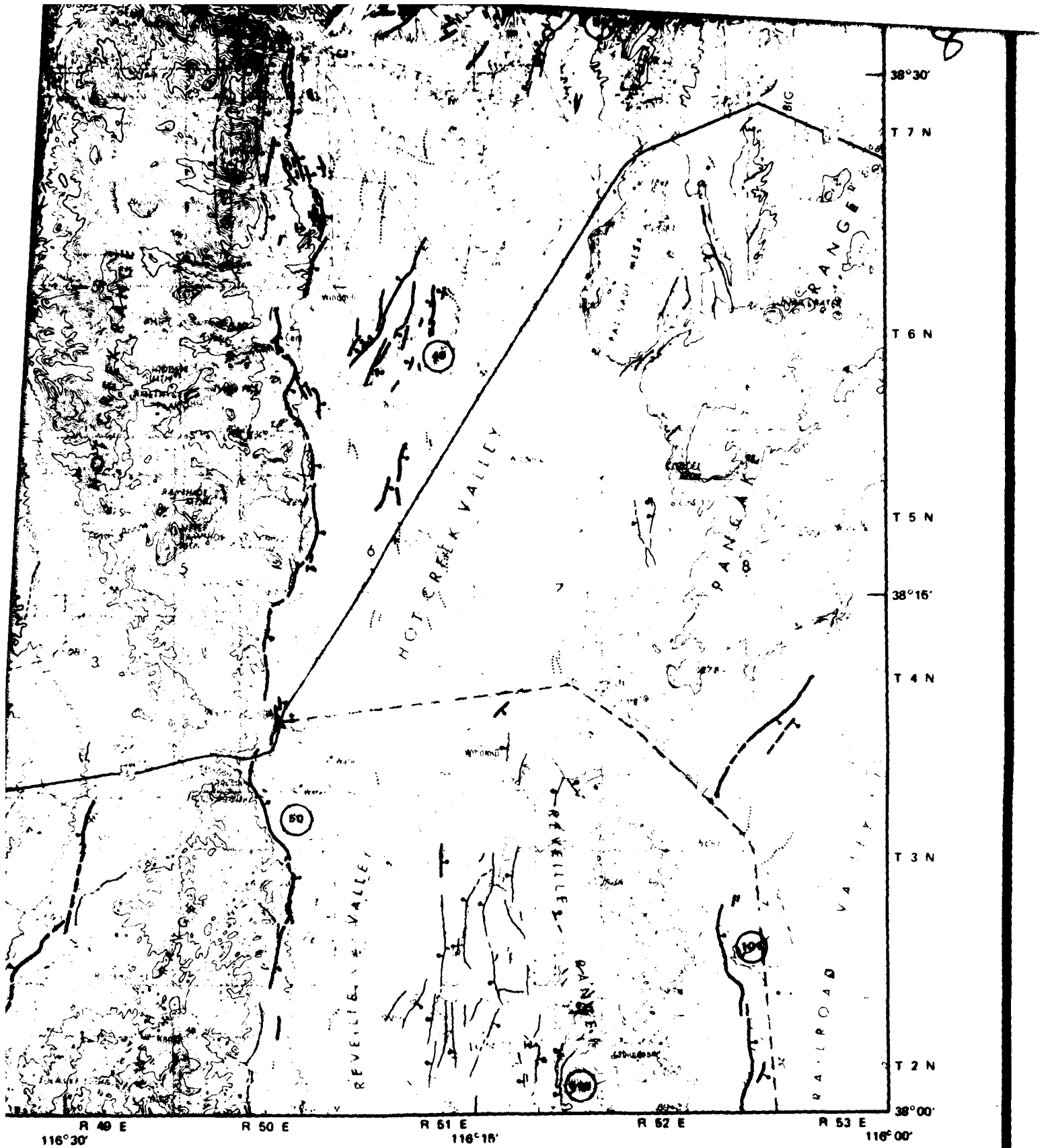
**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp portions of scarp are removed by erosion; dashed line indicates trace inferred between m scarp and (or) presence of lineaments between the scarps. Age of most recent movement



Post-Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years)







**U. S. GEOLOGICAL SURVEY  
DRANGLES**

110°	41°	
KO	TOOELE	SALT LAKE CITY
		CRIPPS



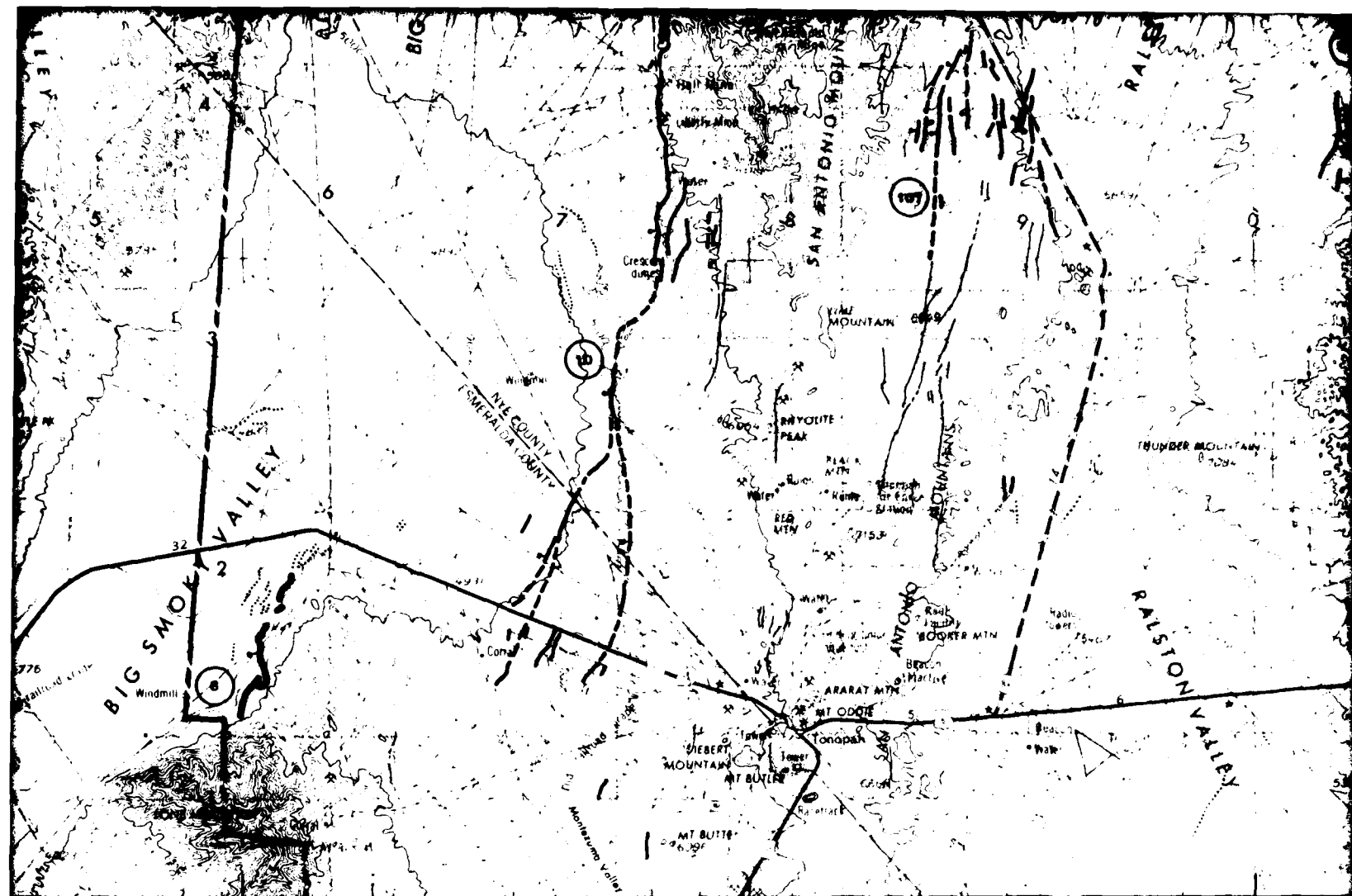
**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault and portions of scarp are removed by erosion; dashed line indicates trace inferred between scarps and (or) presence of lineaments between the scarps. Age of most recent movement is indicated by number.

———— Pleistocene ( $\approx 15,000$  years to 1.8 million years).

Indeterminate; late Tertiary or younger, probably Quaternary. Scarce to lack of young stratigraphic units over trace of fault.

**LINEAMENT:** Vegetation alignments and tonal contrasts without topographic relief;

**APPROXIMATE BOUNDARY OF FAULT STUDY REGION**



R 38 E R 40 E R 41 E R 42 E R 43 E R 44 E  
117°30' 117°15' 117°00'

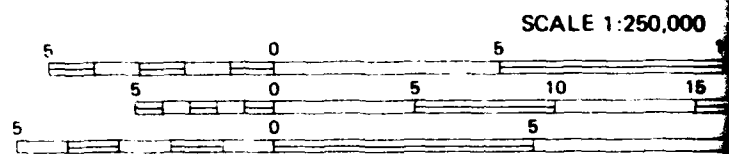
## TION

continuous fault scarp except for narrow drainage crossings where small  
inferred between more widely spaced scarps based on alignment of  
most recent movement denoted by line width.

and (< 15,000 years).

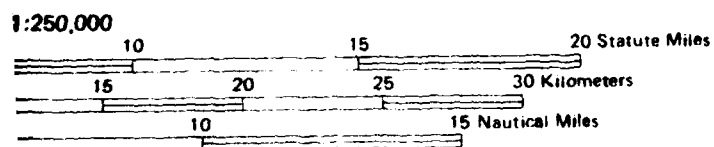
Quaternary. Scarps are prominent but age cannot be determined due  
fault.

topographic relief; believed to be faults or fault-related cracks.



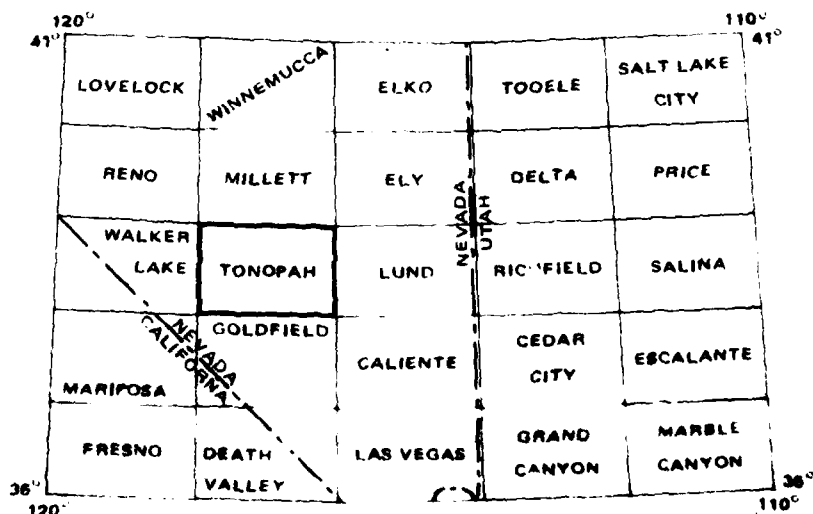
SCALE 1:250,000  
CONTOUR INTERVAL 200  
WITH SUPPLEMENTARY CONTOURS AT 100  
Base from U.S. Geological Survey, Tonopah Quad  
1:250,000, Transverse Mercator Projection

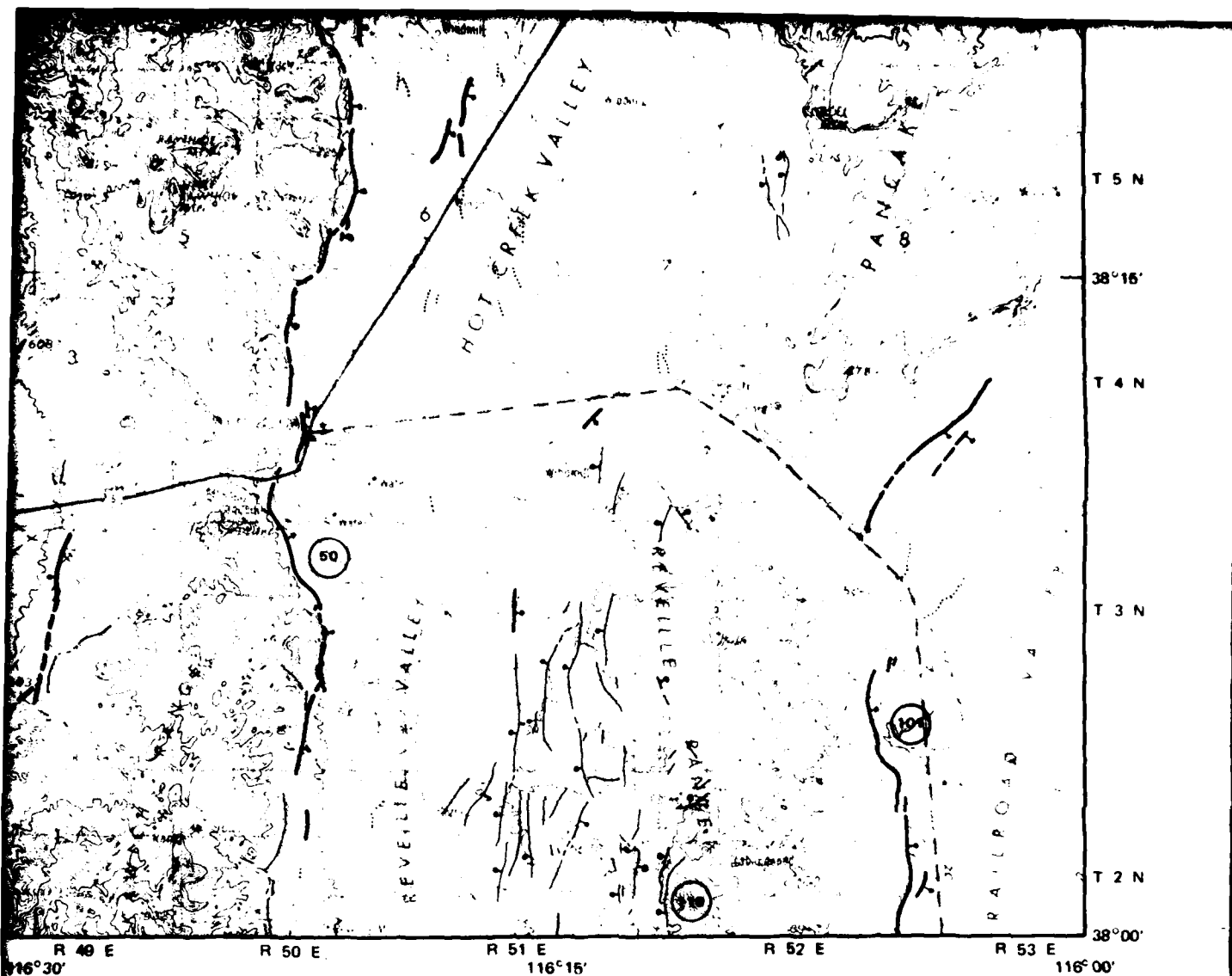




RVAL 200 FEET  
 URS AT 100 FOOT INTERVALS  
 Tonopah Quadrangle, Revised 1971,  
 Mercator Projection

LOCATION DIAGRAM OF U. S. GEOLOGICAL SURVEY  
 1° x 2° QUADRANGLES





GEOLOGICAL SURVEY  
NGLES

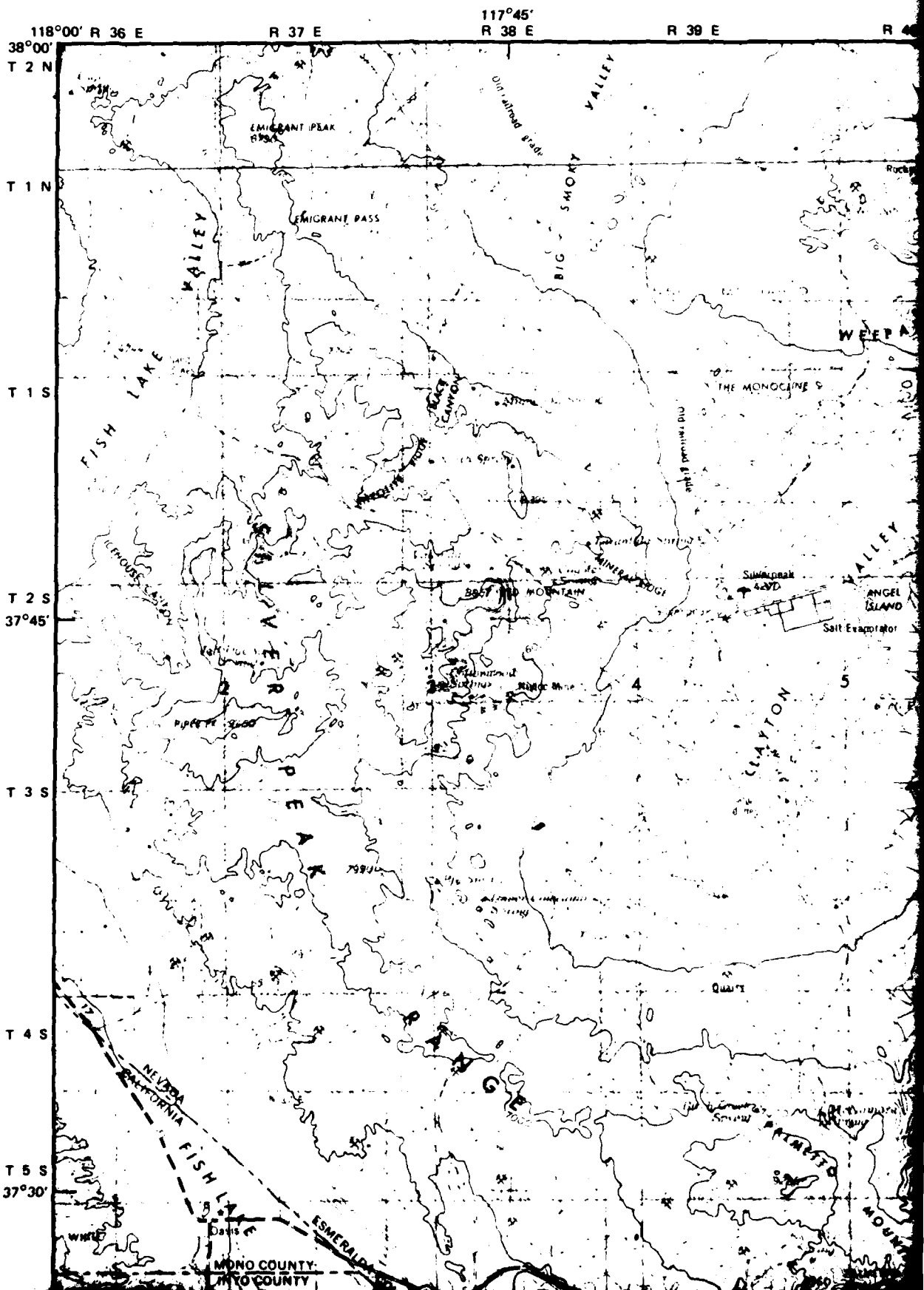
TOOELE	SALT LAKE CITY
DELTA	PRICE
RICHFIELD	SALINA
CEDAR CITY	ESCALANTE
GRAND CANYON	MARBLE CANYON

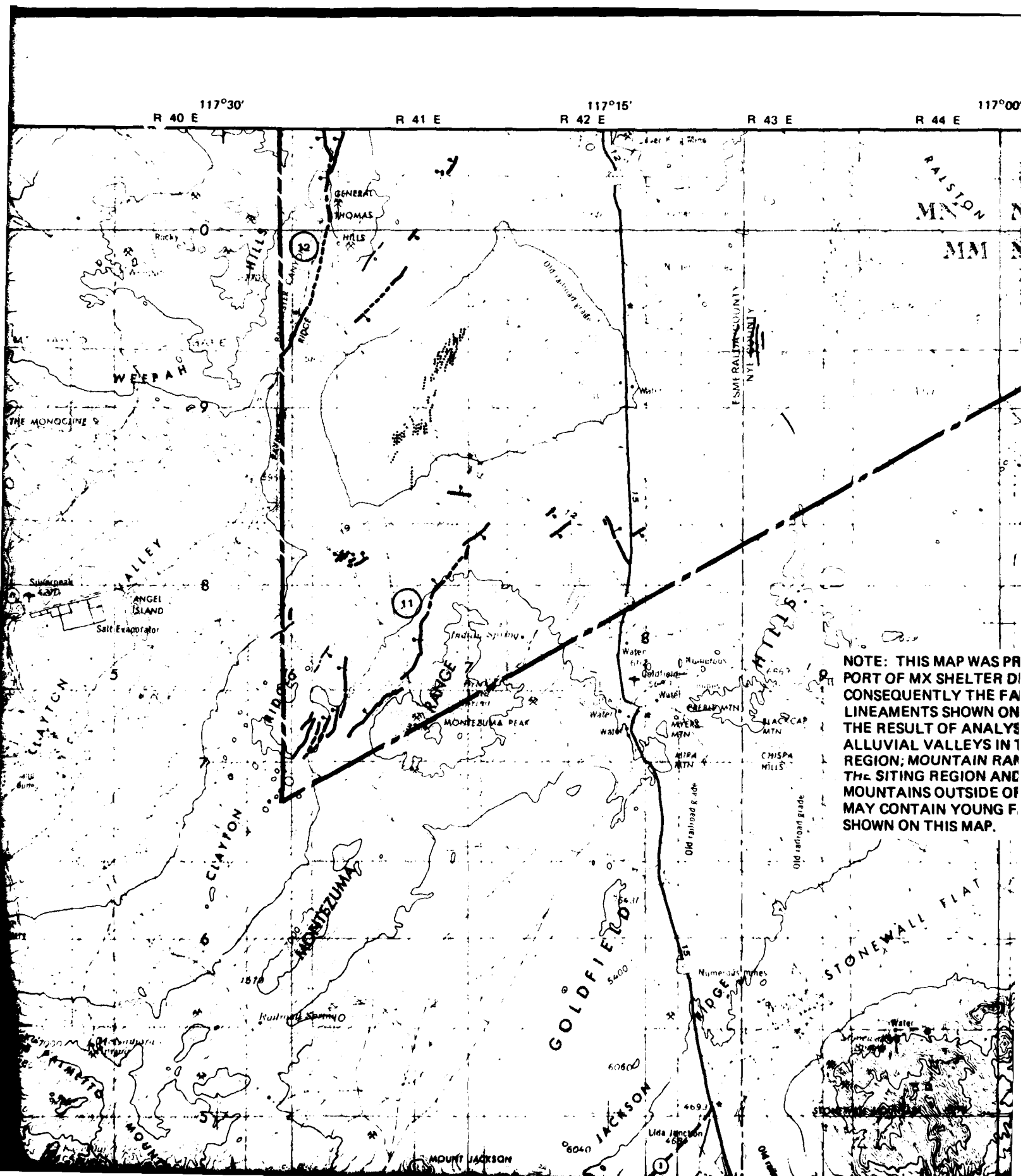
**Ertec**  
The Earth Technology Corporation

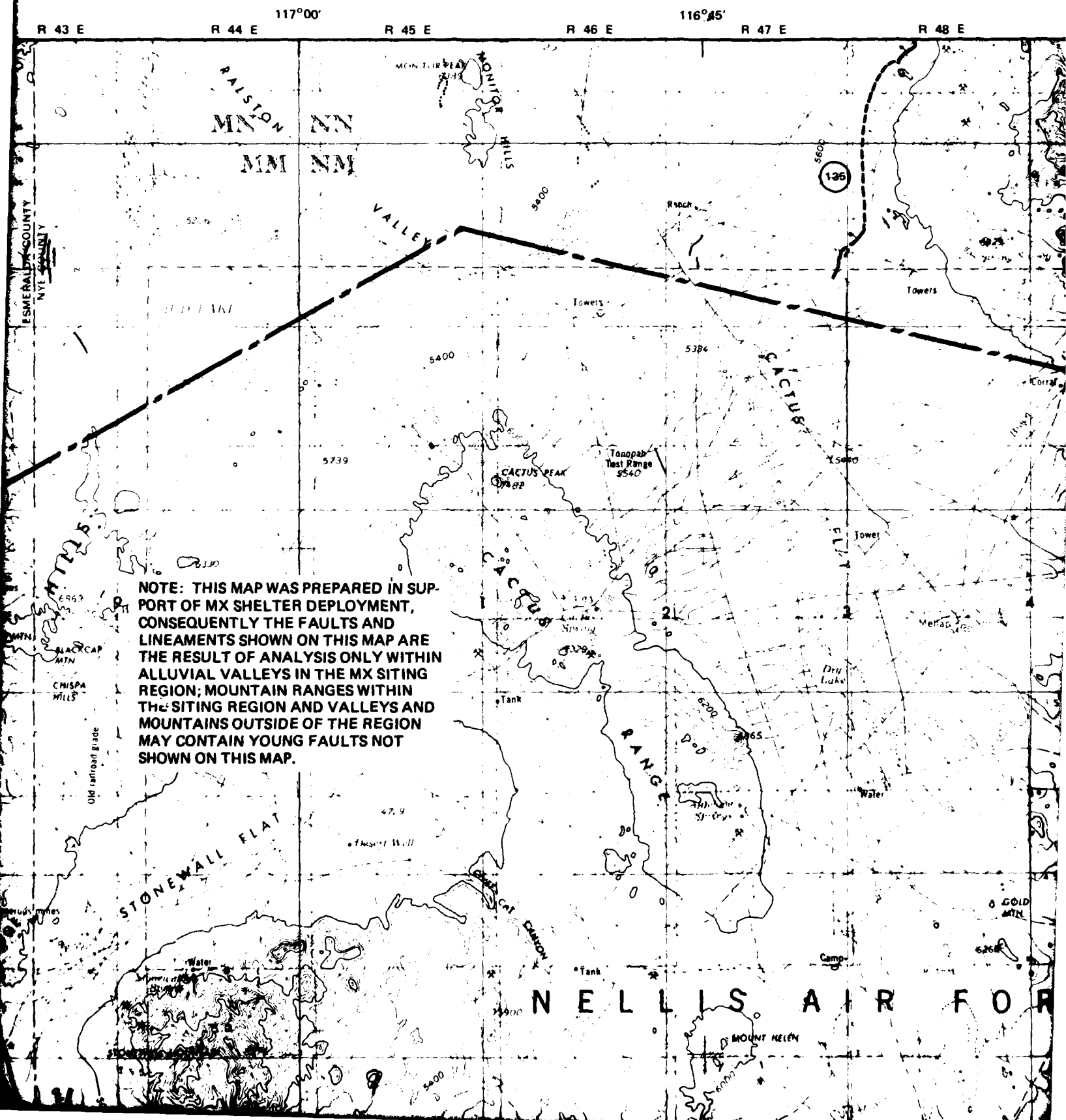
MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX

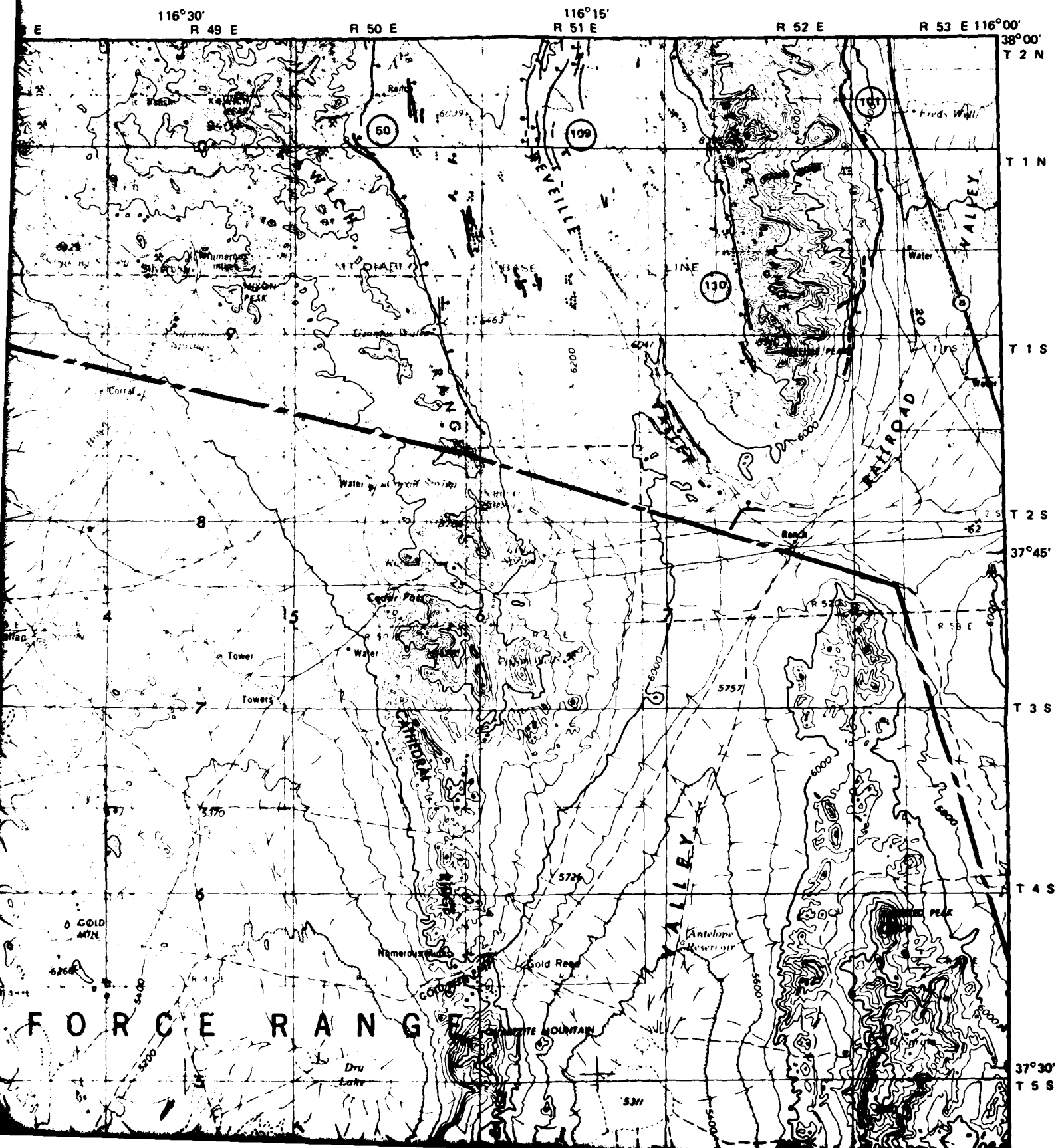
**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEAMENTS, MX SITING REGION  
TONOPAH 1° x 2° QUADRANGLE, NEVADA  
PLATE 7**

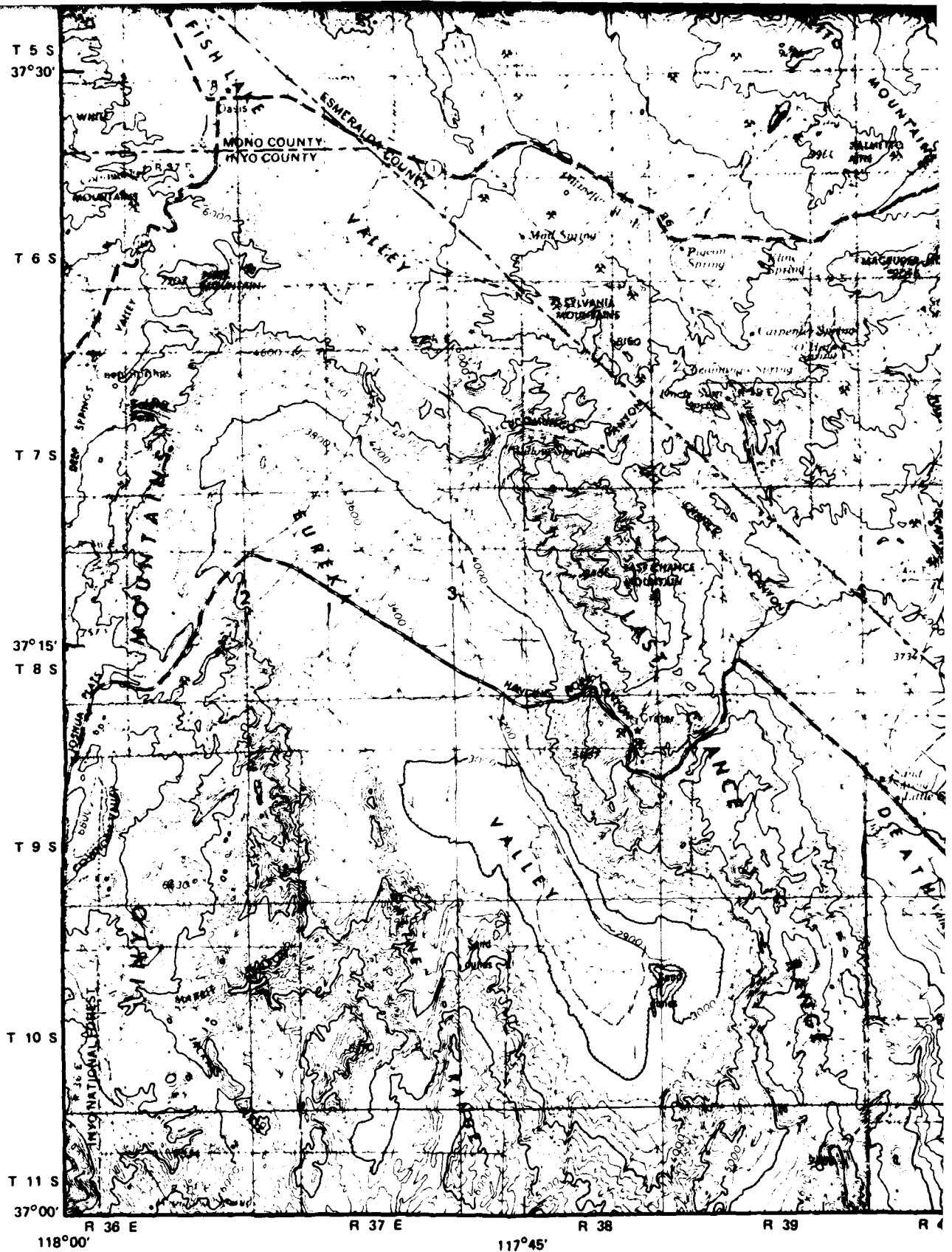




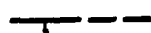








# EXPLANATION



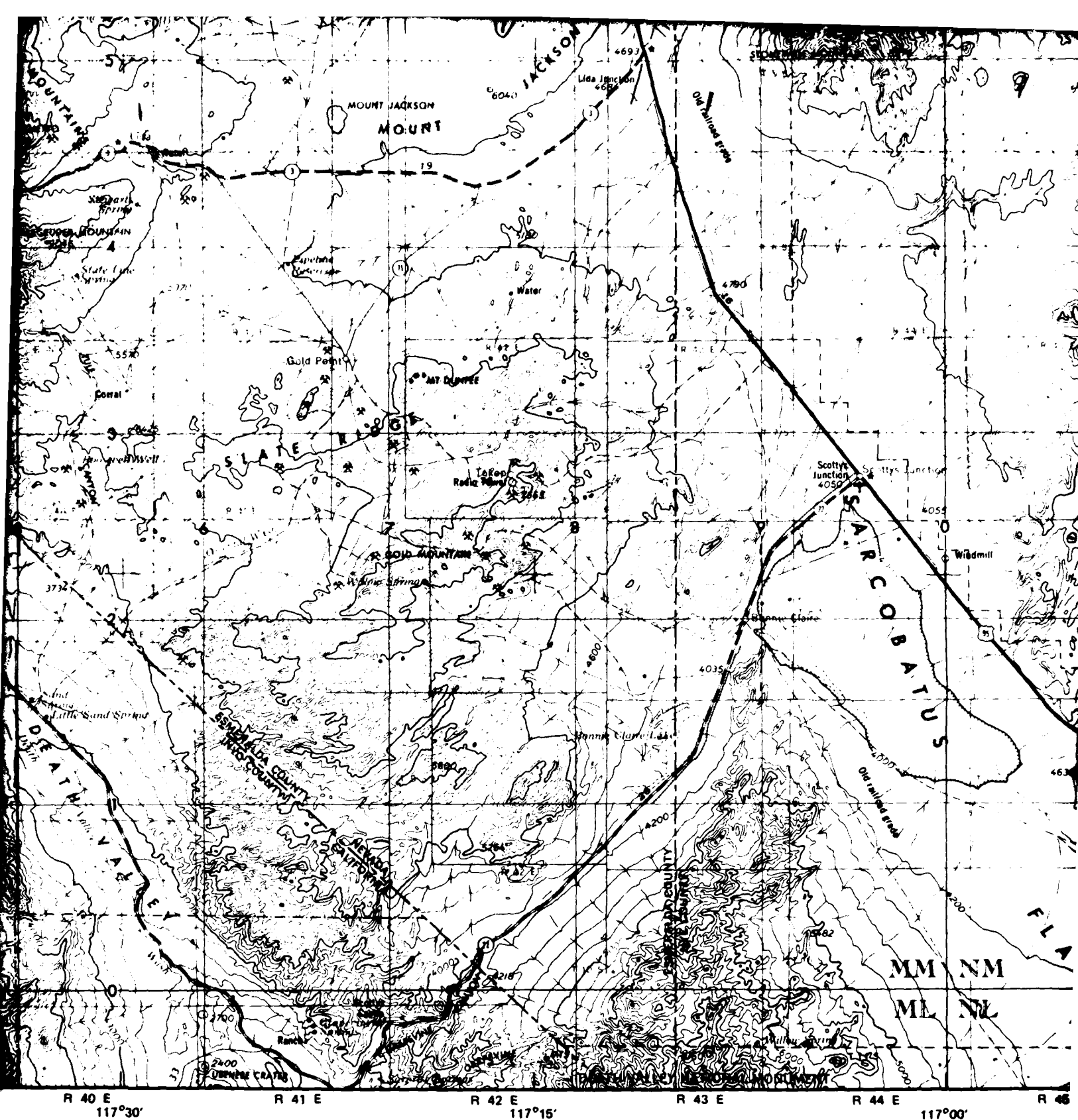
**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp ex portions of scarp are removed by erosion; dashed line indicates trace inferred between more scarps and (or) presence of lineaments between the scarps. Age of most recent movement d



Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).

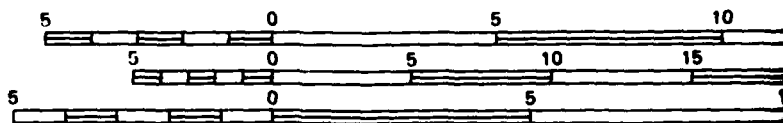


Pleistocene ( $\approx 15,000$  years to 1.8 million years).

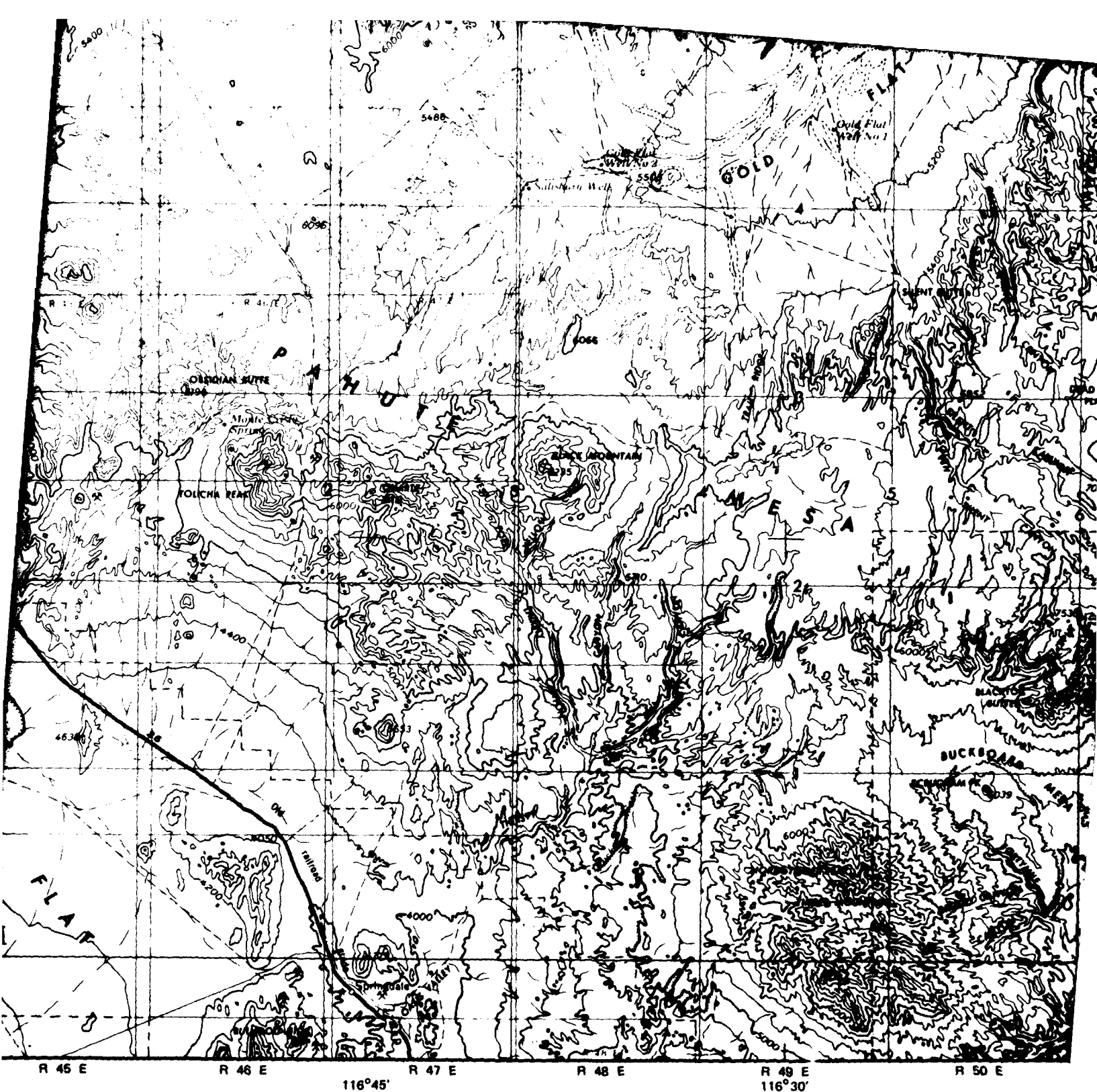


fault scarp except for narrow drainage crossings where small  
between more widely spaced scarps based on alignment of  
movement denoted by line width.

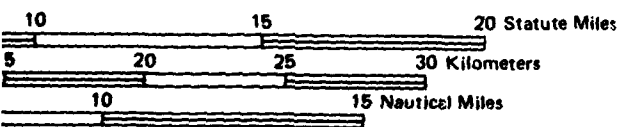
(100 years).



CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FEET  
Base from U.S. Geological Survey, Goldfield Quadrangle  
1:250,000, Transverse Mercator Projection



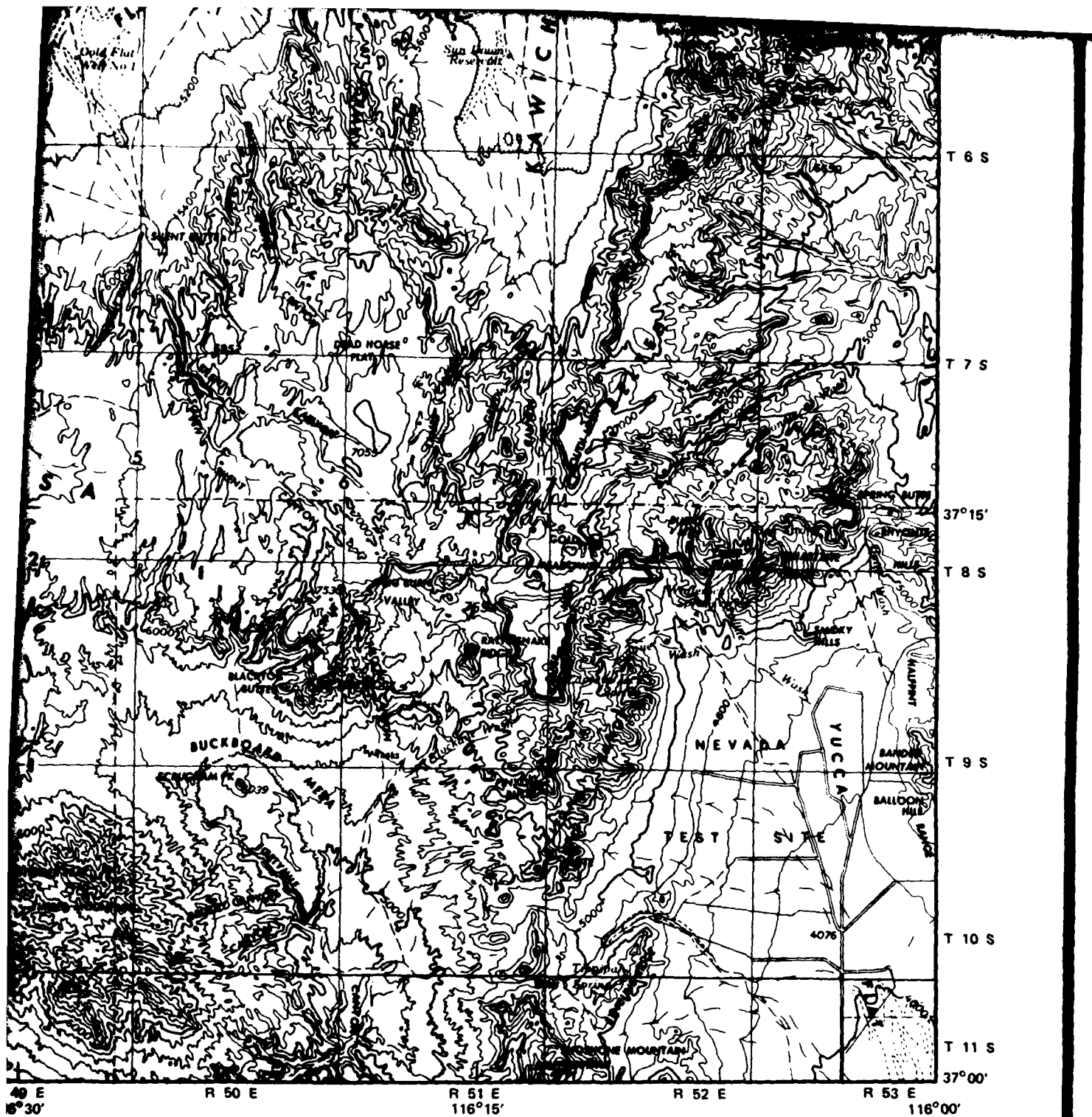
LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES



10 FEET  
100 FOOT INTERVALS  
Quadrangle, Revised 1970,  
r Projection

120°					110°
41°	LOVELOCK	WINNEMUCCA	ELKO	TOOELE	SALT LAKE CITY
	RENO	MILLETT	ELY	DELTA	PRICE
	WALKER LAKE	TONOPAH	LUND	RICHFIELD	SALINA
	NEVADA - UTAH				
	CALIFORNIA				





# GEOLOGICAL SURVEY ANGLES

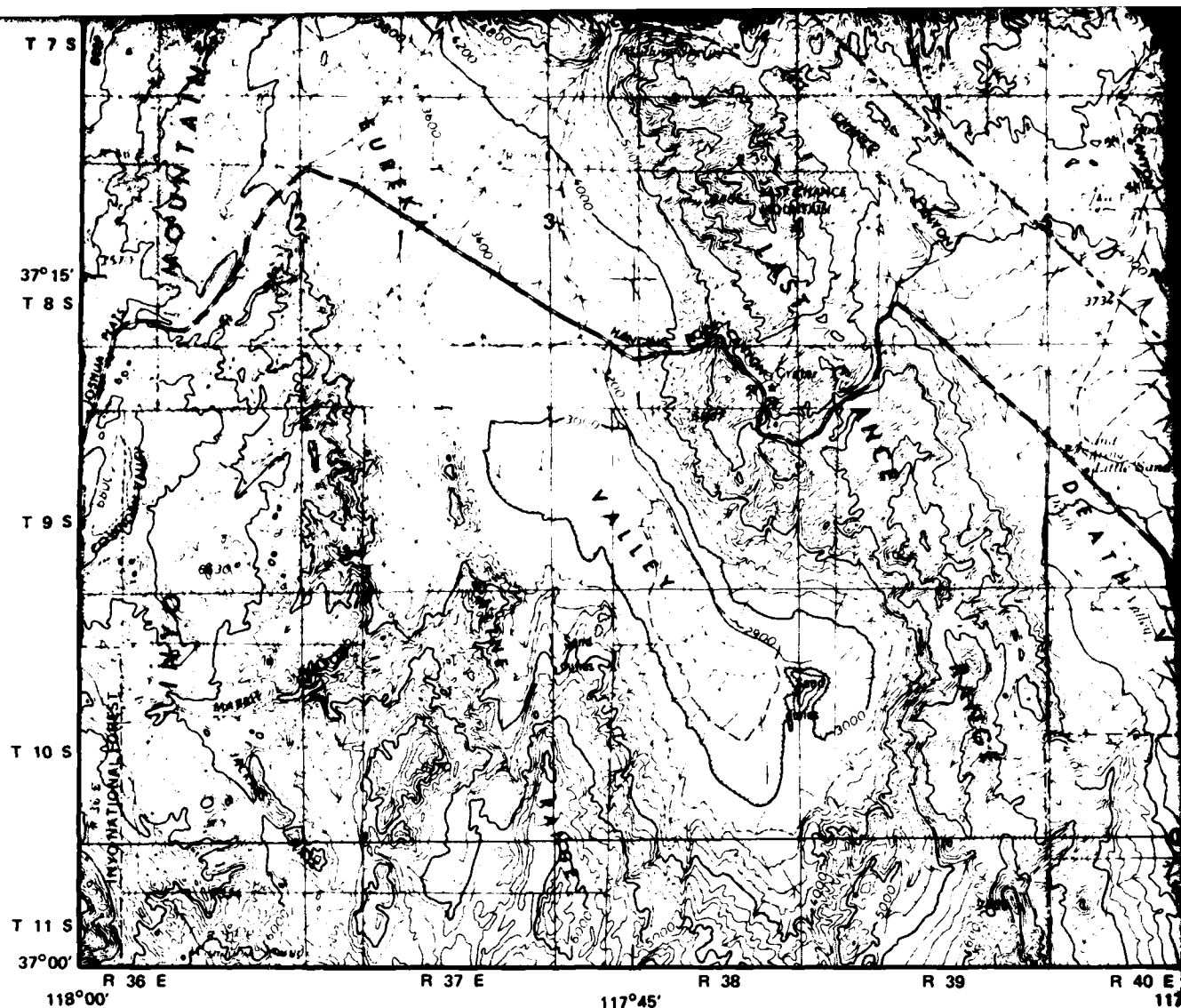
NEVADA UTAH	TOOELE	SALT LAKE CITY
	DELTA	PRICE
	RICHFIELD	SALINA
	CEDAR	ESCALANTE

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BMO/AFRC-MX

PRELIMINARY MAP OF YOUNG FAULTS





## EXPLANATION



**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp except portions of scarp are removed by erosion; dashed line indicates trace inferred between more widely spaced scarp and (or) presence of lineaments between the scarps. Age of most recent movement denotes



Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).



Pleistocene ( $\approx 15,000$  years to 1.8 million years).



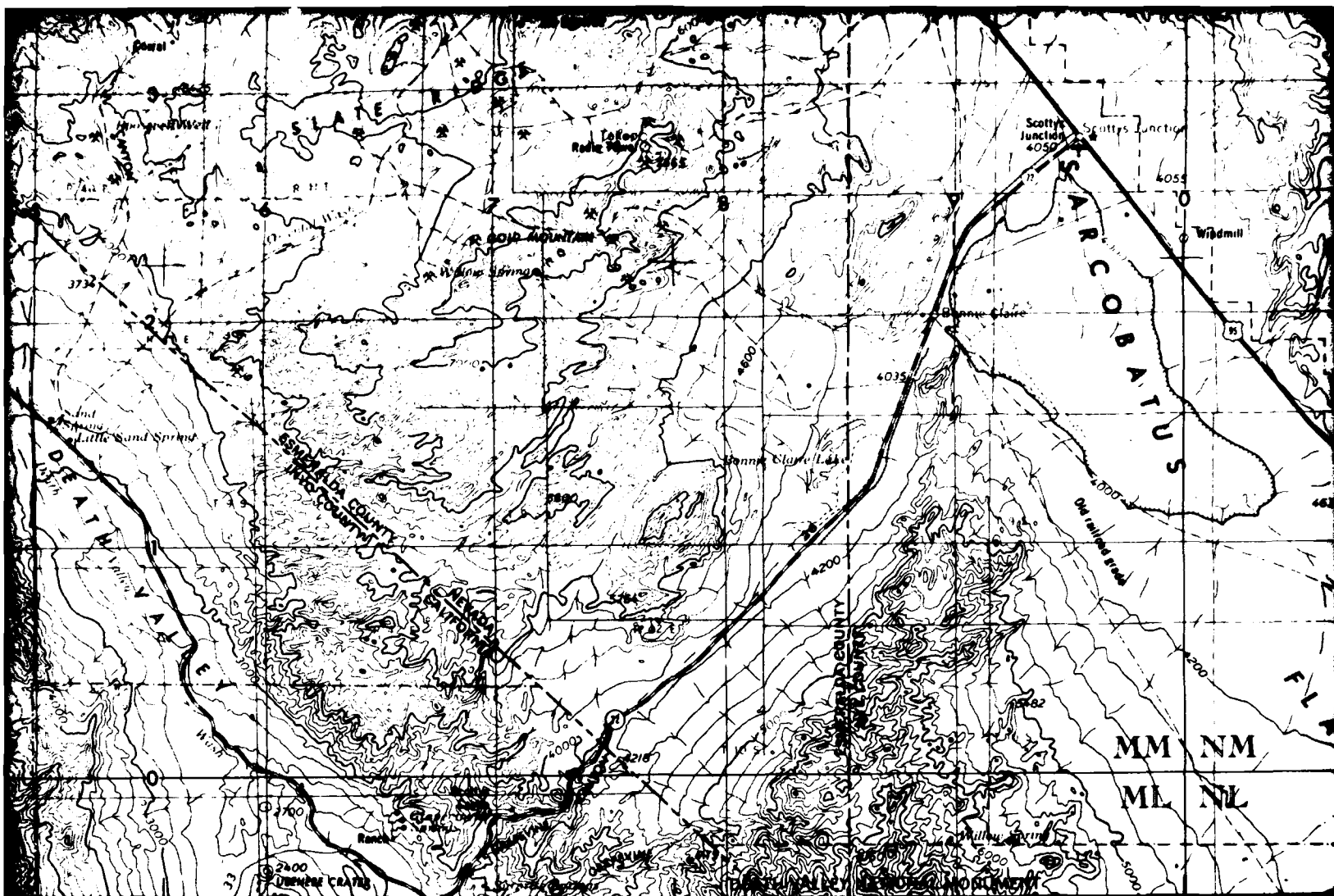
Indeterminate; late Tertiary or younger, probably Quaternary. Scarps are prominent due to lack of young stratigraphic units over trace of fault.



**LINEAMENT:** Vegetation alignments and tonal contrasts without topographic relief; believed to be

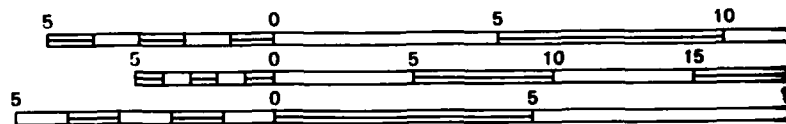


**APPROXIMATE BOUNDARY OF FAULT-STUDY REGION**



R 40 E 117°30' R 41 E R 42 E 117°15' R 43 E R 44 E 117°00' R 45 E

**SCALE 1:250,000**



**CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FEET**  
Base from U.S. Geological Survey, Goldfield Quadrangle  
1:250,000, Transverse Mercator Projection

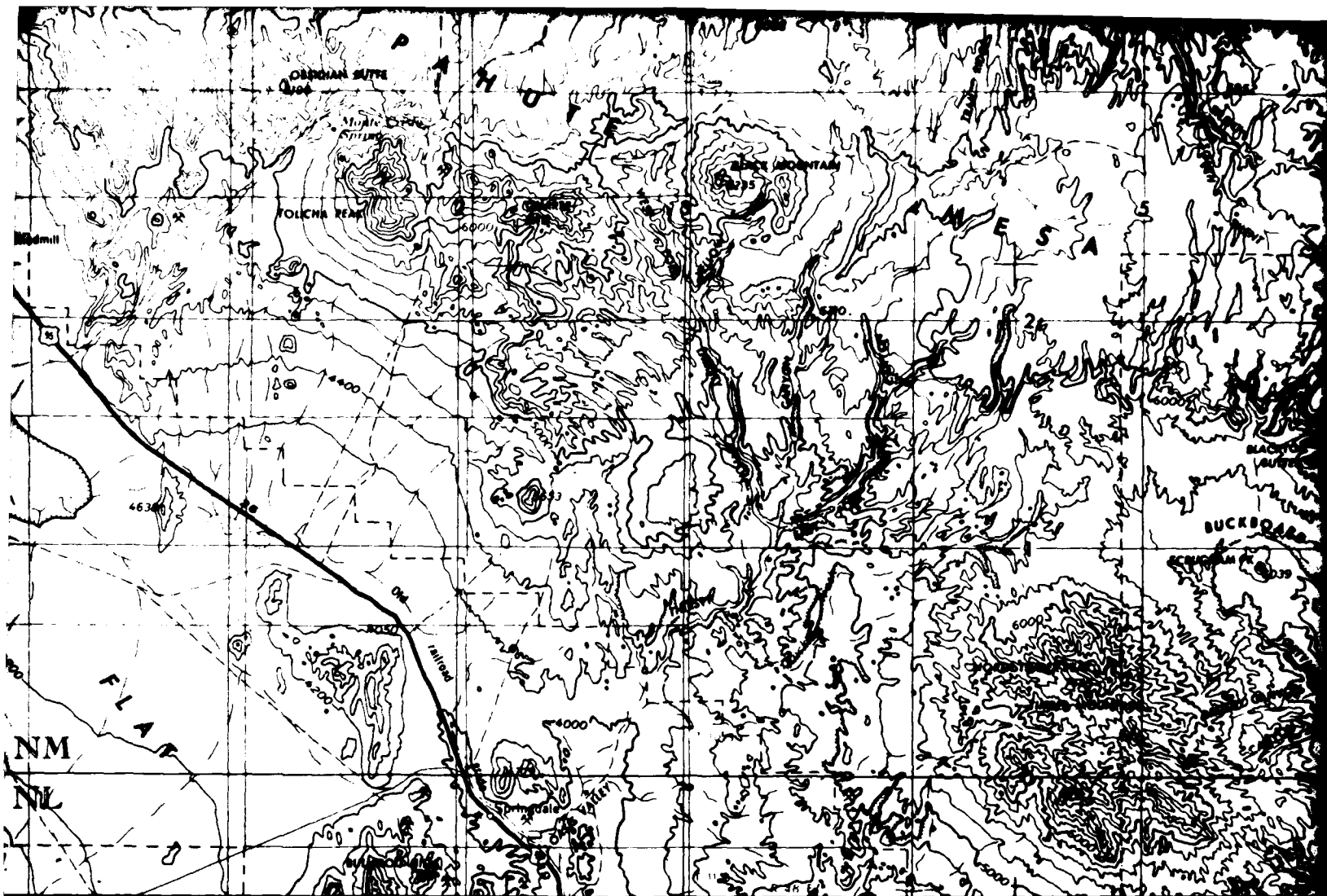
fault scarp except for narrow drainage crossings where small  
between more widely spaced scarps based on alignment of  
movement denoted by line width.

100 years).

2. **Scarps are prominent but age cannot be determined due**

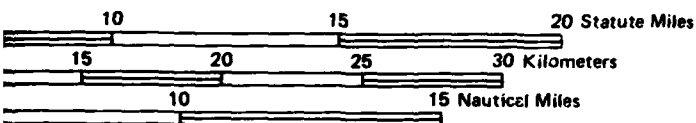
**relief: believed to be faults or fault-related cracks.**





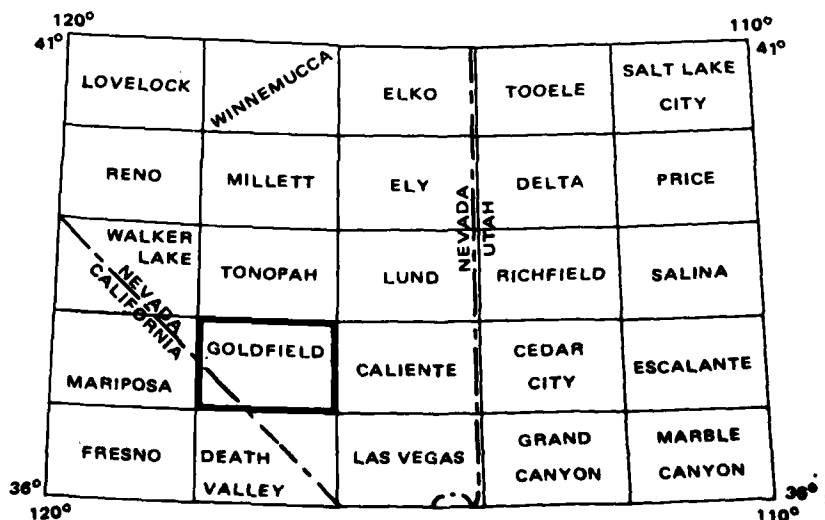
00' R 45 E R 46 E R 47 E R 48 E R 49 E R 50 E  
116°45' 116°30'

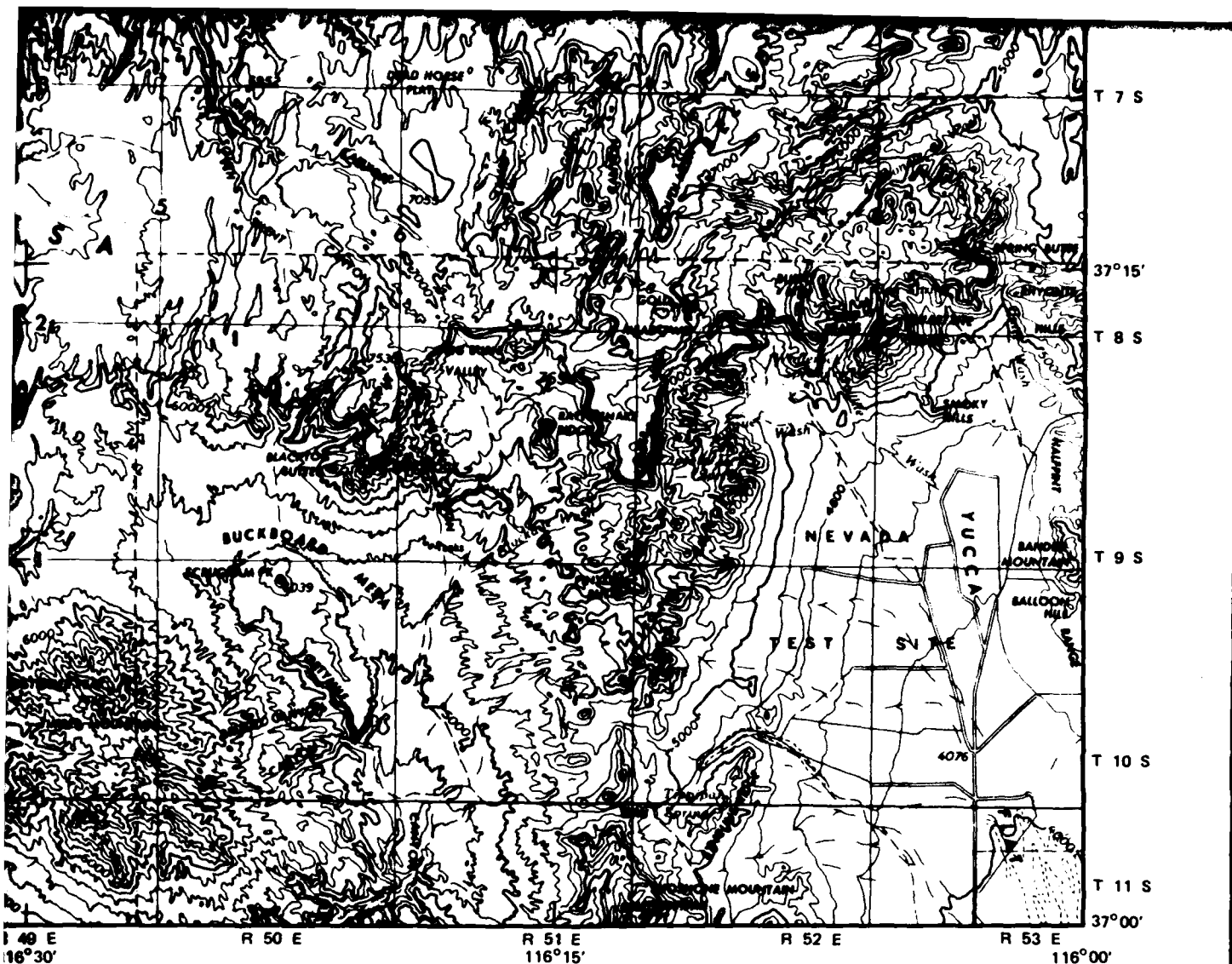
1:50,000



VAL 200 FEET  
IRS AT 100 FOOT INTERVALS  
Goldfield Quadrangle, Revised 1970,  
Mercator Projection

LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES





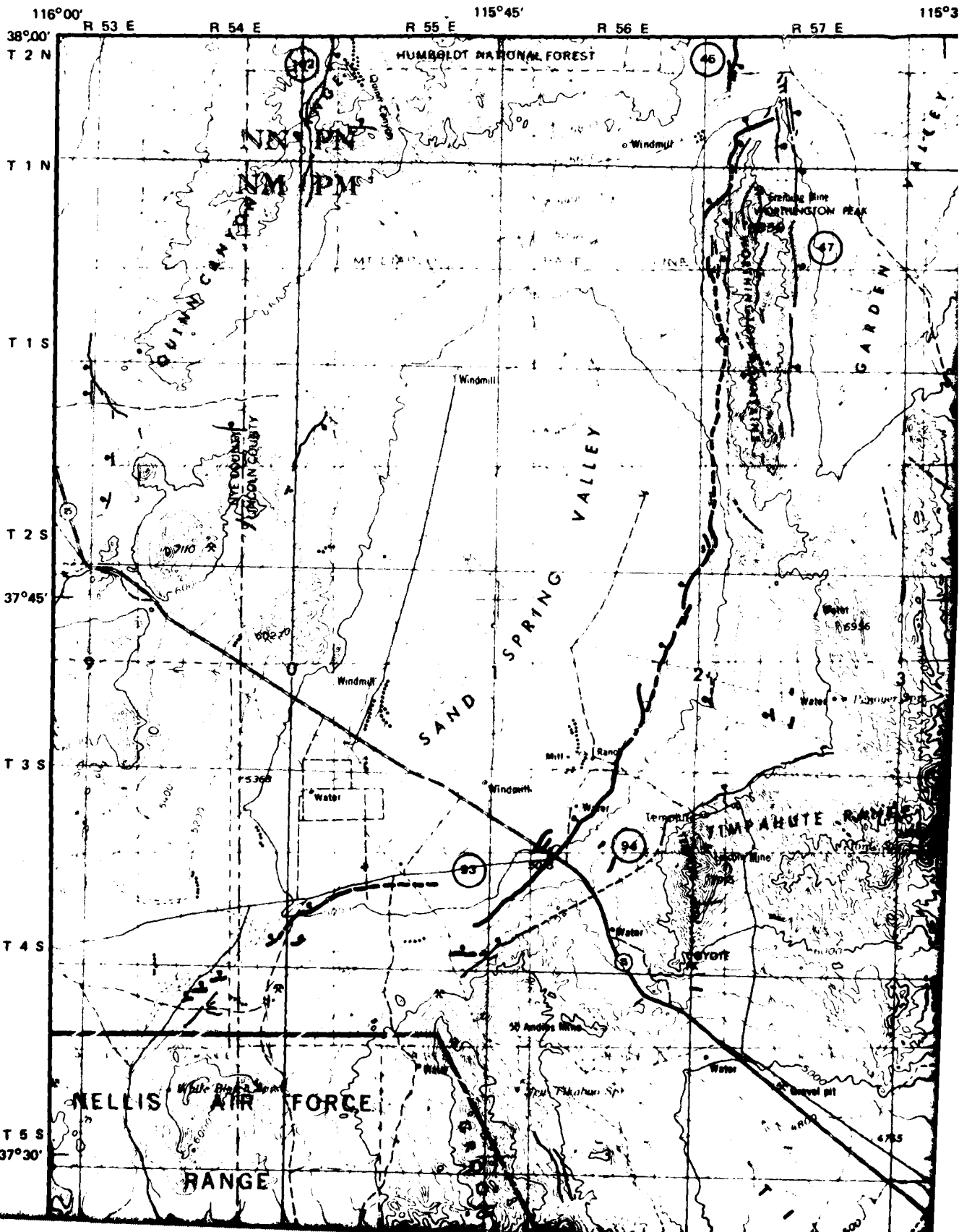
U.S. GEOLOGICAL SURVEY  
 1:50,000 SCALE

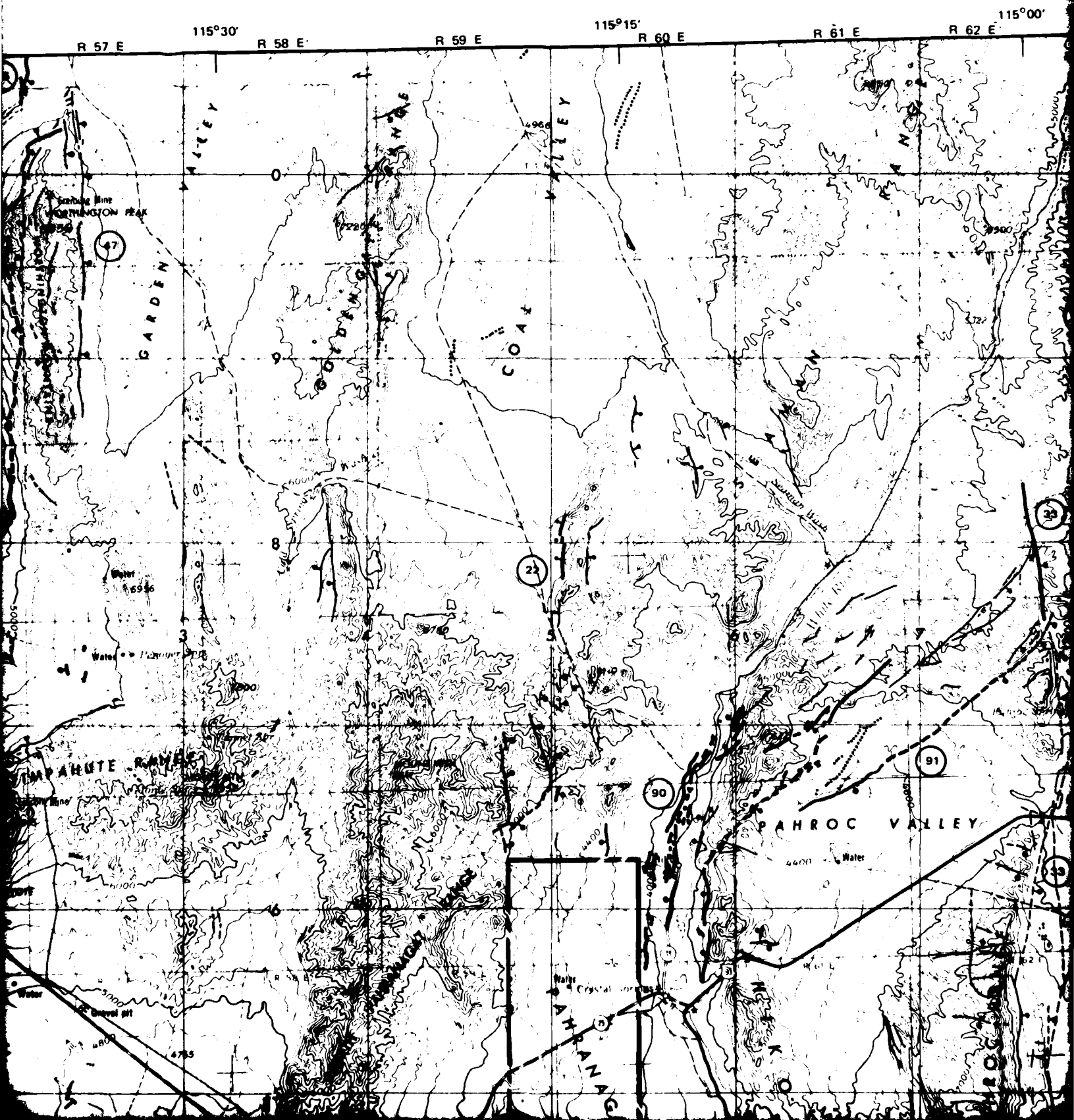
NEVADA - UTAH	TOOELE	SALT LAKE CITY
	DELTA	PRICE
	RICHFIELD	SALINA
	CEDAR CITY	ESCALANTE
	GRAND CANYON	MARBLE CANYON

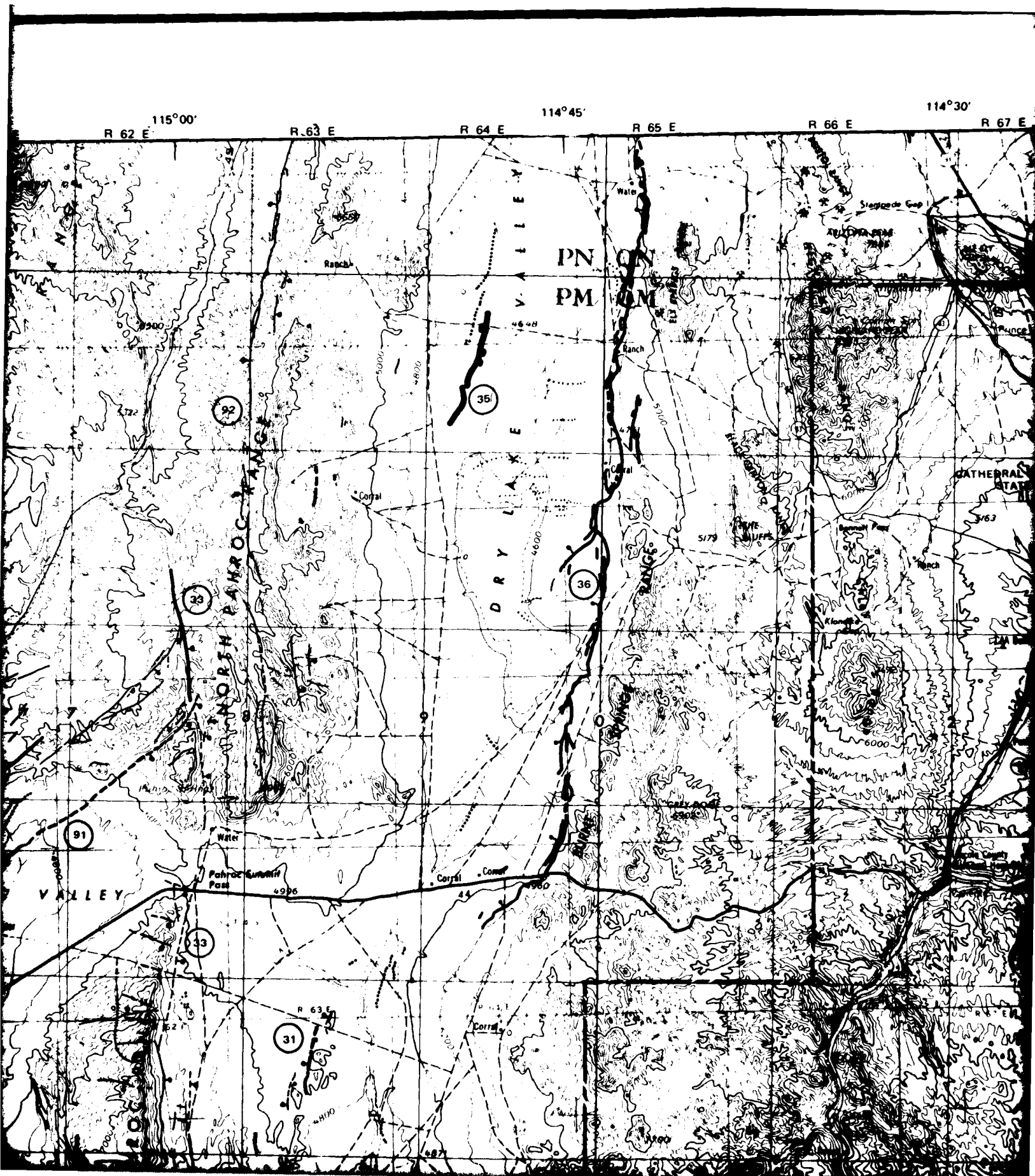
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 DEPARTMENT OF THE AIR FORCE  
 BMO/AFRC-MX

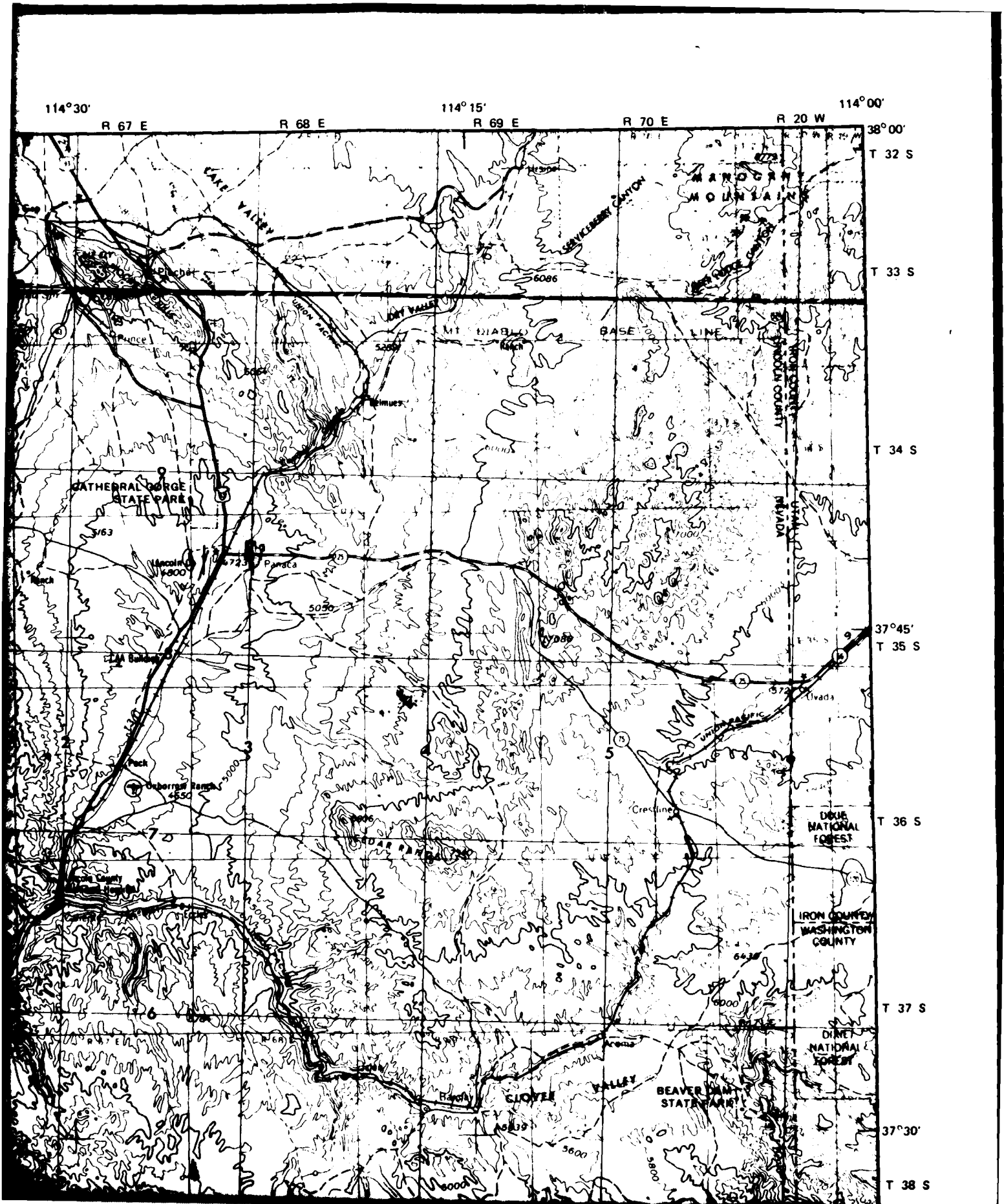
**PRELIMINARY MAP OF YOUNG FAULTS  
 AND LINEAMENTS, MX SITING REGION  
 GOLDFIELD 1° x 2° QUADRANGLE, NEVADA  
 PLATE A8**





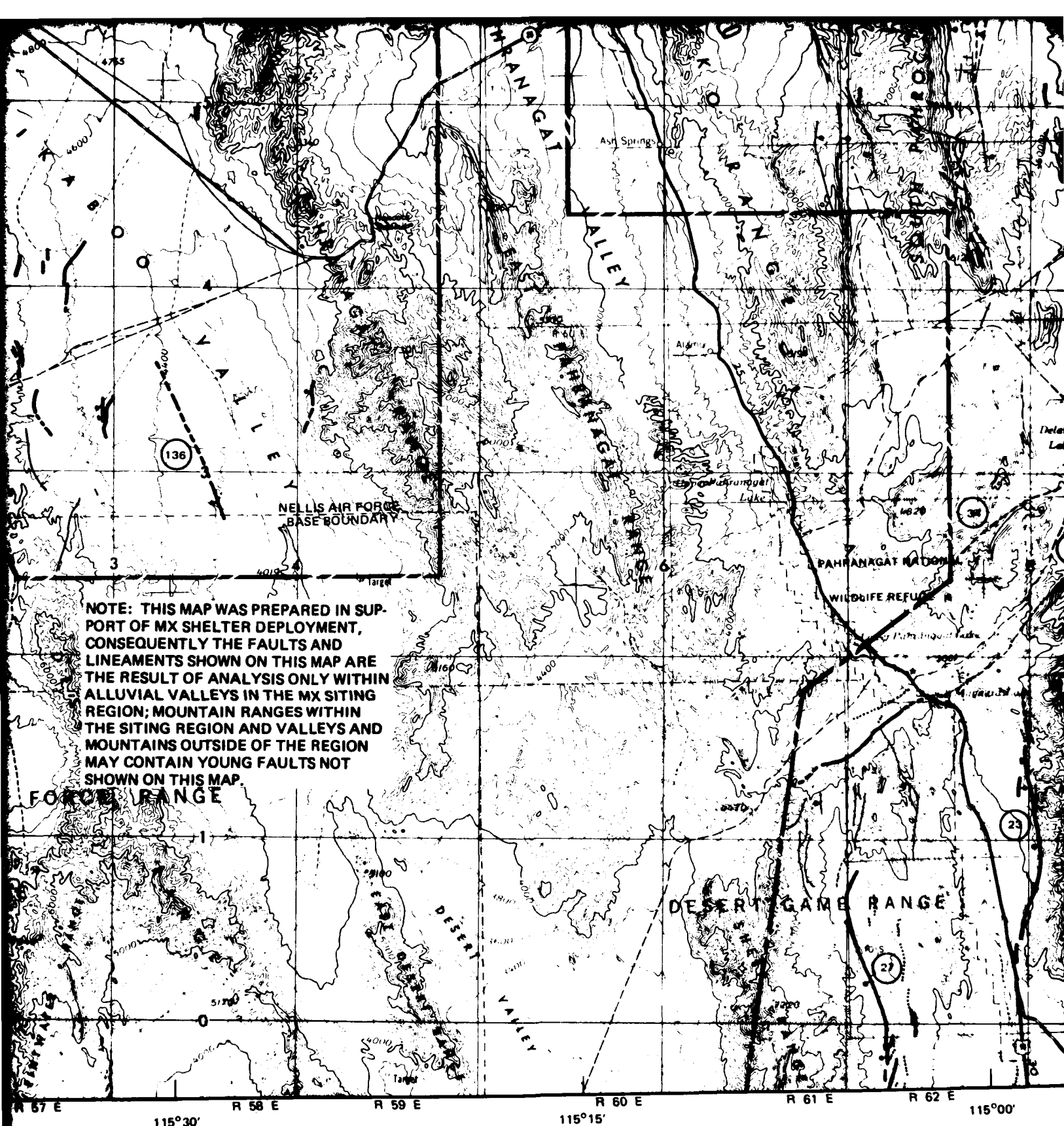






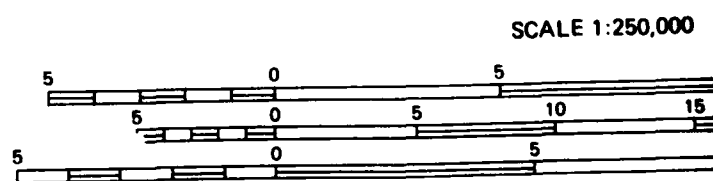




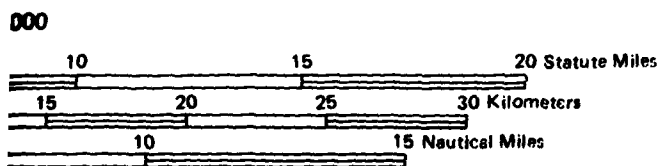
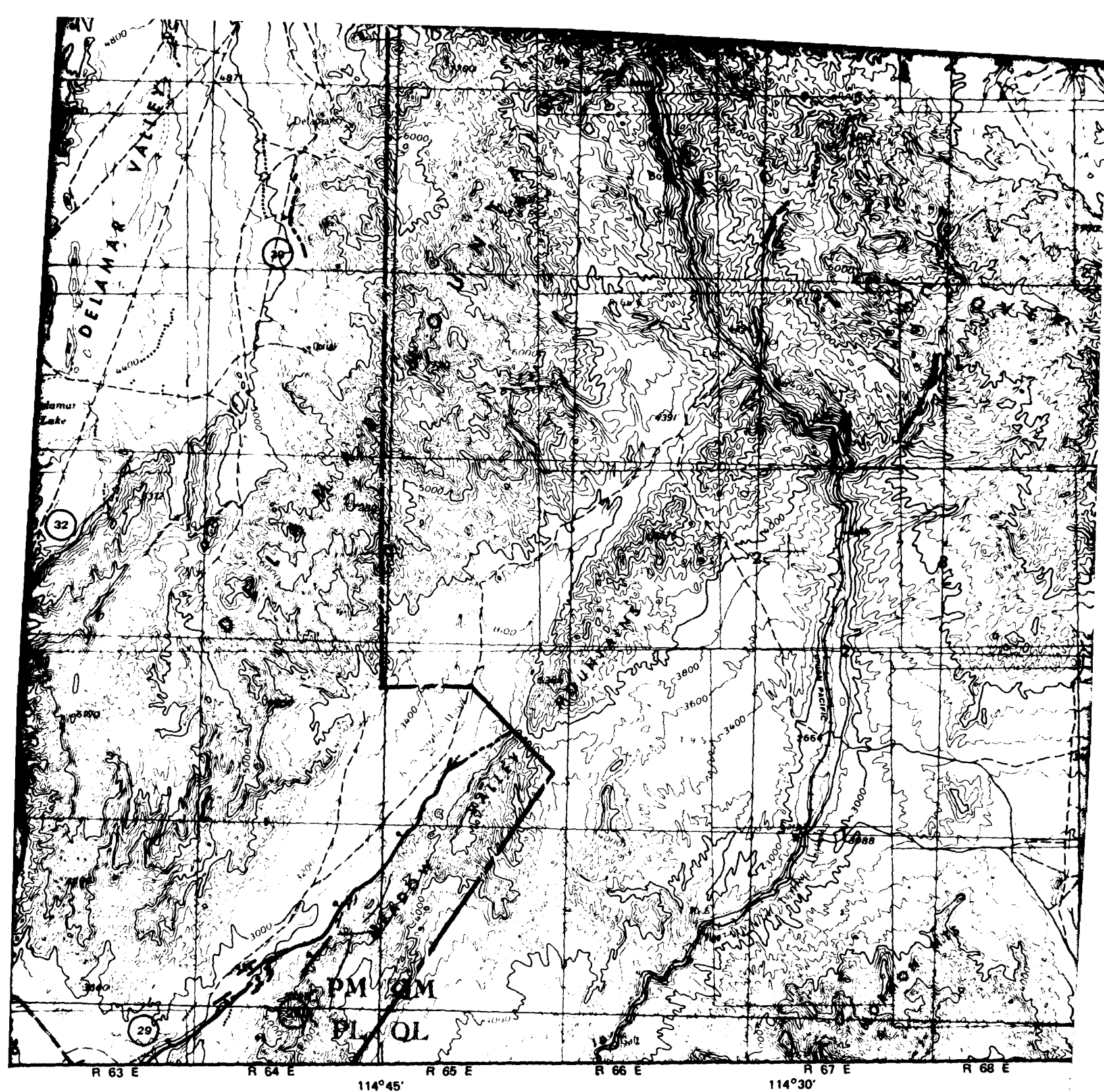


ous fault scarp except for narrow drainage crossings where small  
 rred between more widely spaced scarps based on alignment of  
 cent movement denoted by line width.

15,000 years).



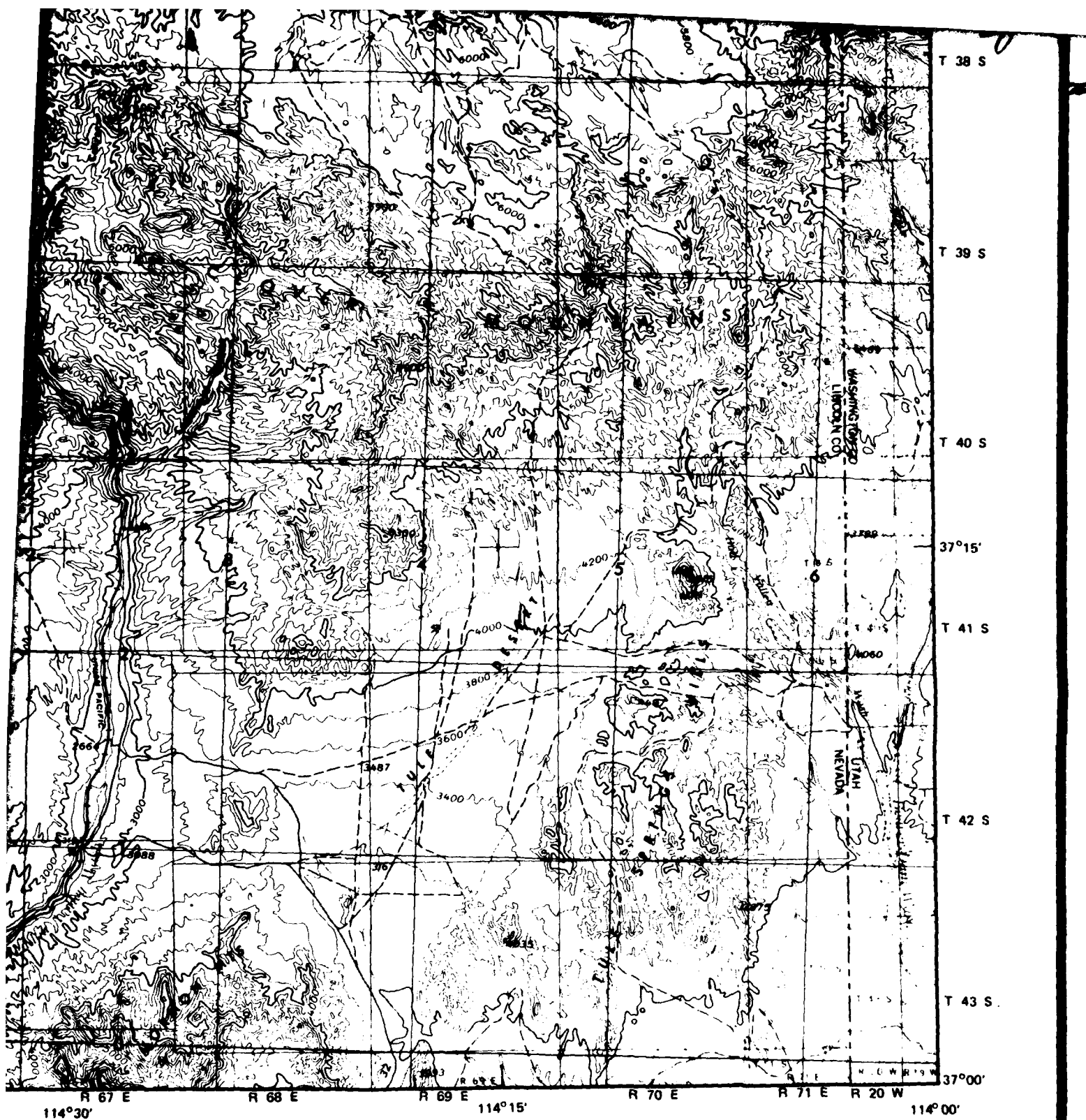
CONTOUR INTERVAL 200 FT  
 WITH SUPPLEMENTARY CONTOURS AT 10  
 Base from U.S. Geological Survey, Caliente Quad  
 1:250,000, Transverse Mercator P



200 FEET  
AT 100 FOOT INTERVALS  
to Quadrangle, Revised 1970,  
ator Projection

LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES

120°					110°
41°	LOVELOCK	WINNEMUCCA	ELKO	TOOELE	SALT LAKE CITY
	HENO	MILLETT	ELY	DELTA	PRICE
	WALKER LAKE	TONOPAH	LUND	RICHFIELD	SALINA
	NEVADA				UTAH

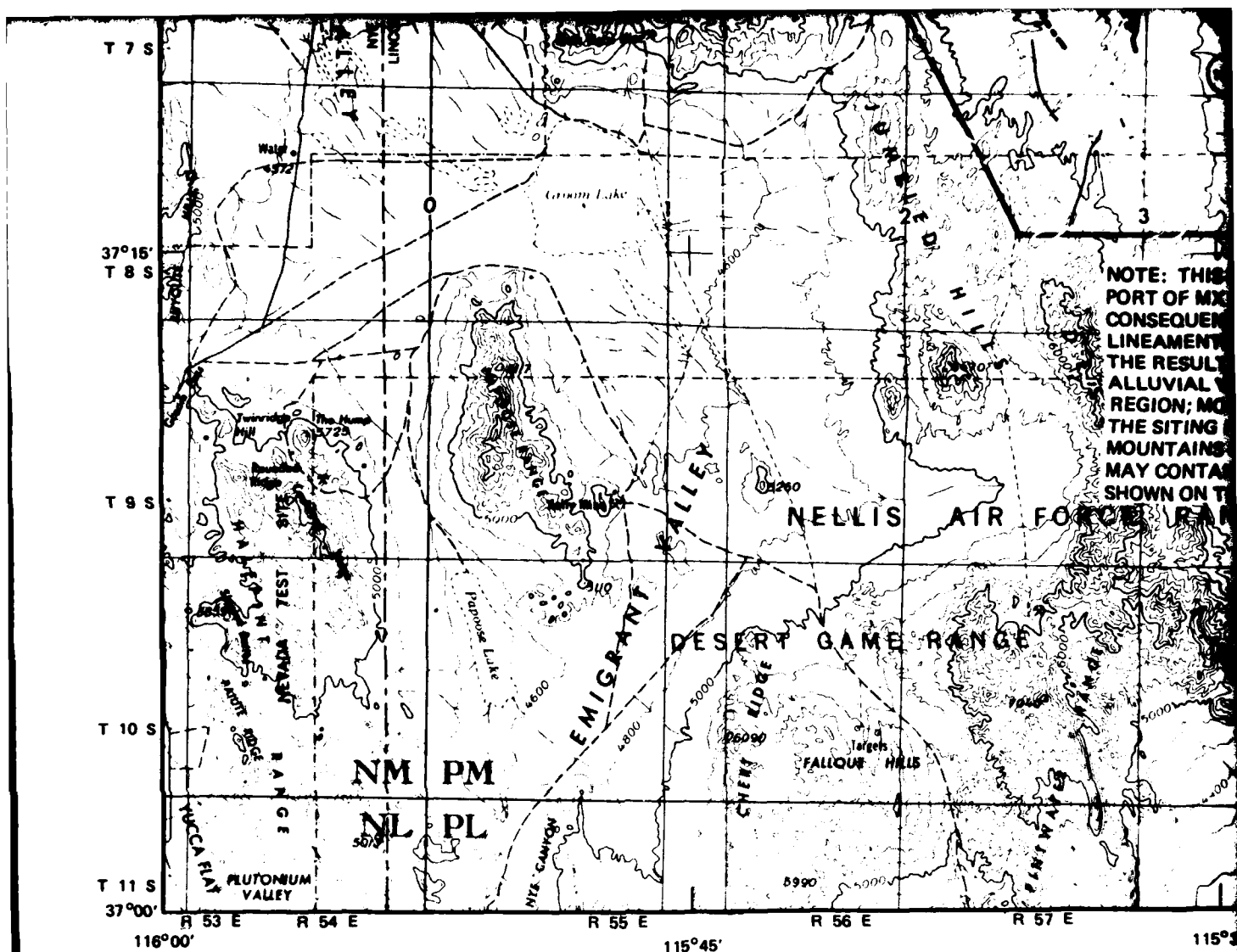


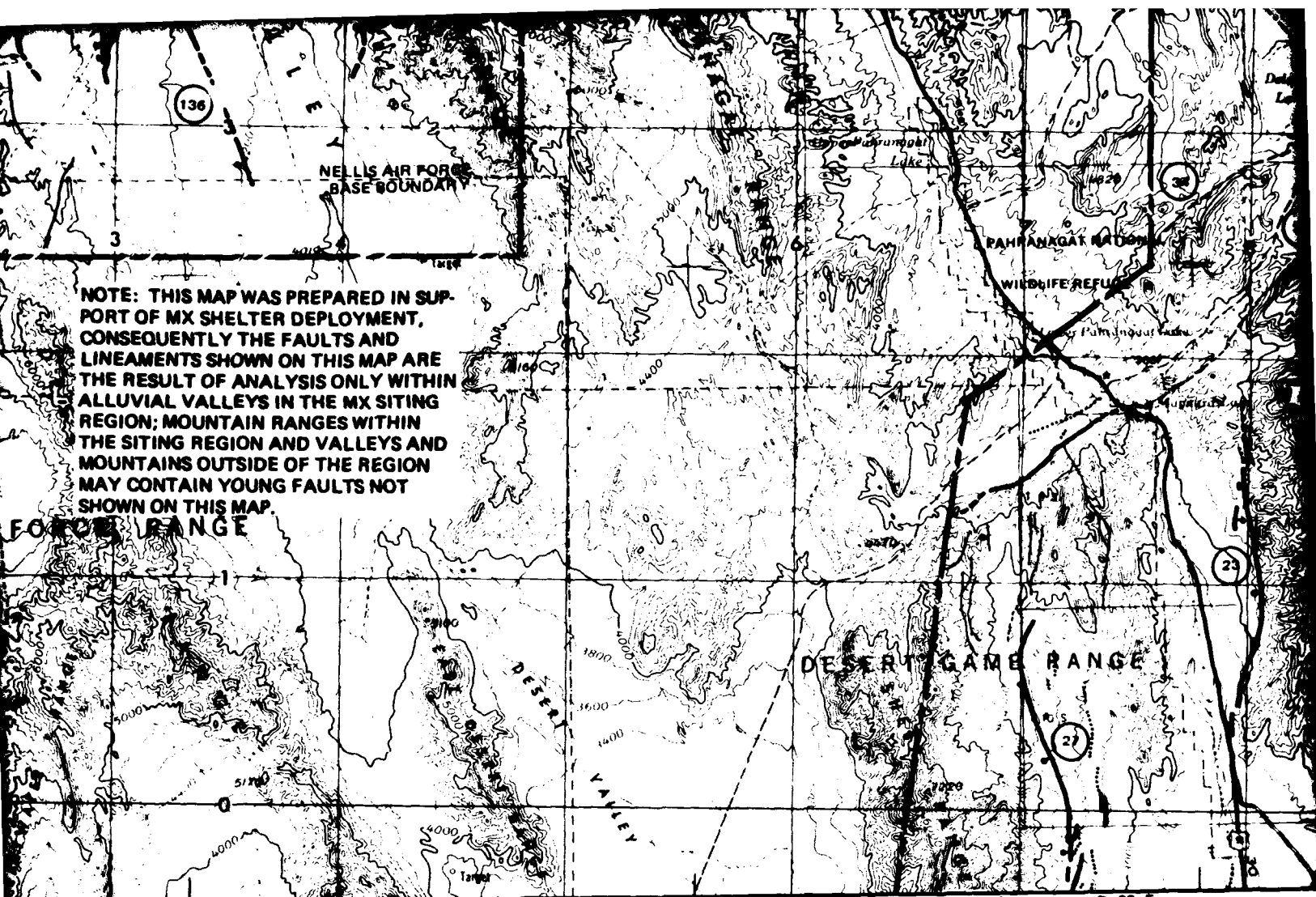
OF U.S. GEOLOGICAL SURVEY  
QUADRANGLES

ELKO	TOOELE	SALT LAKE CITY
ELY	DELTA	PRICE
RICHFIELD	SALINA	

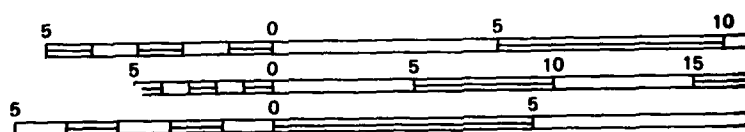
**Ertec**

MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX





SCALE 1:250,000



CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FEET  
Base from U.S. Geological Survey, Caliente Quadrangle  
1:250,000, Transverse Mercator Projection



NORTH

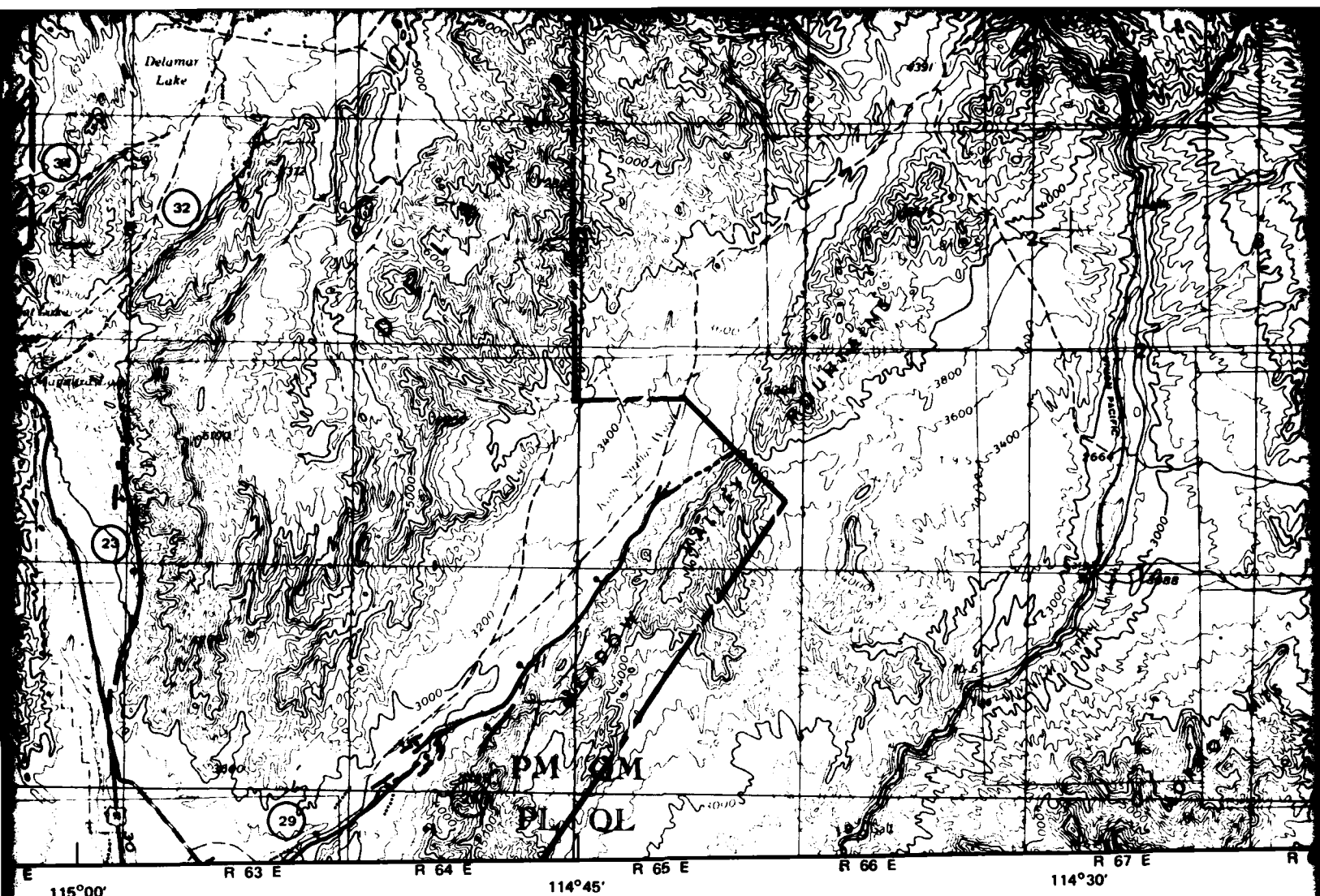
the fault scarp except for narrow drainage crossings where small  
and between more widely spaced scarps based on alignment of  
ant movement denoted by line width.

(5,000 years).

ary. Scarps are prominent but age cannot be determined due

ic relief; believed to be faults or fault-related cracks.





115°00'

R 63 E

R 64 E

114°45'

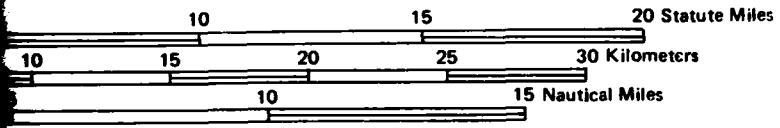
R 65 E

R 66 E

114°30'

R 67 E

SCALE 1:250,000

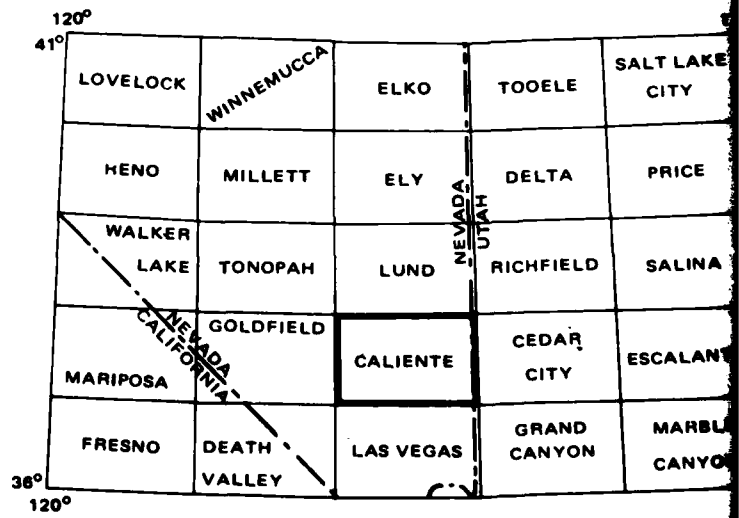


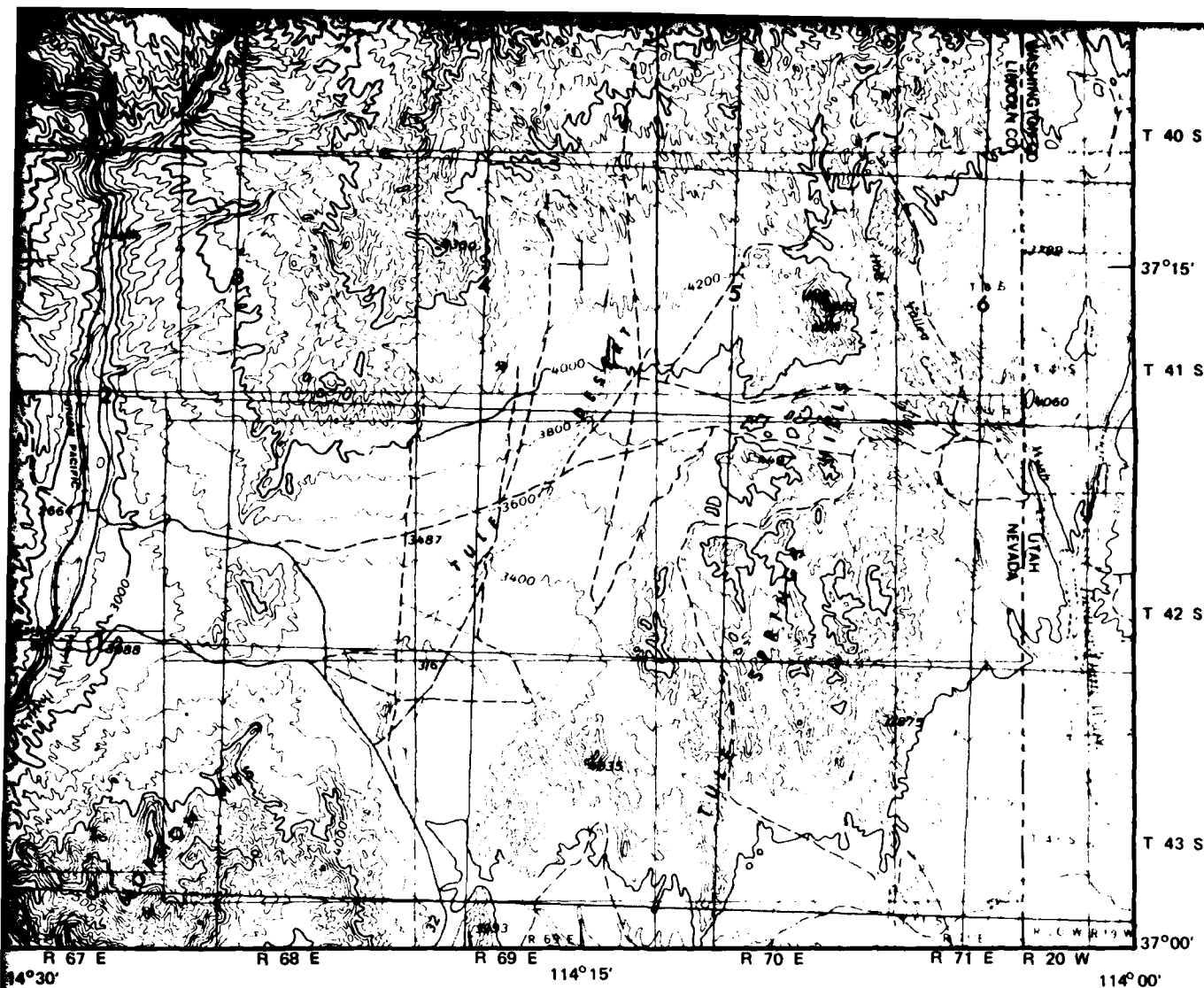
INTERVAL 200 FEET  
CONTOURS AT 100 FOOT INTERVALS  
Survey, Caliente Quadrangle, Revised 1970,  
Transverse Mercator Projection



NORTH

LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES





**U.S. GEOLOGICAL SURVEY  
QUADRANGLES**

CO	TOOELE	SALT LAKE CITY
UTAH	DELTA	PRICE
NEVADA	RICHFIELD	SALINA
UTAH	CEDAR CITY	ESCALANTE
NEVADA	GRAND CANYON	MAHLE CANYON

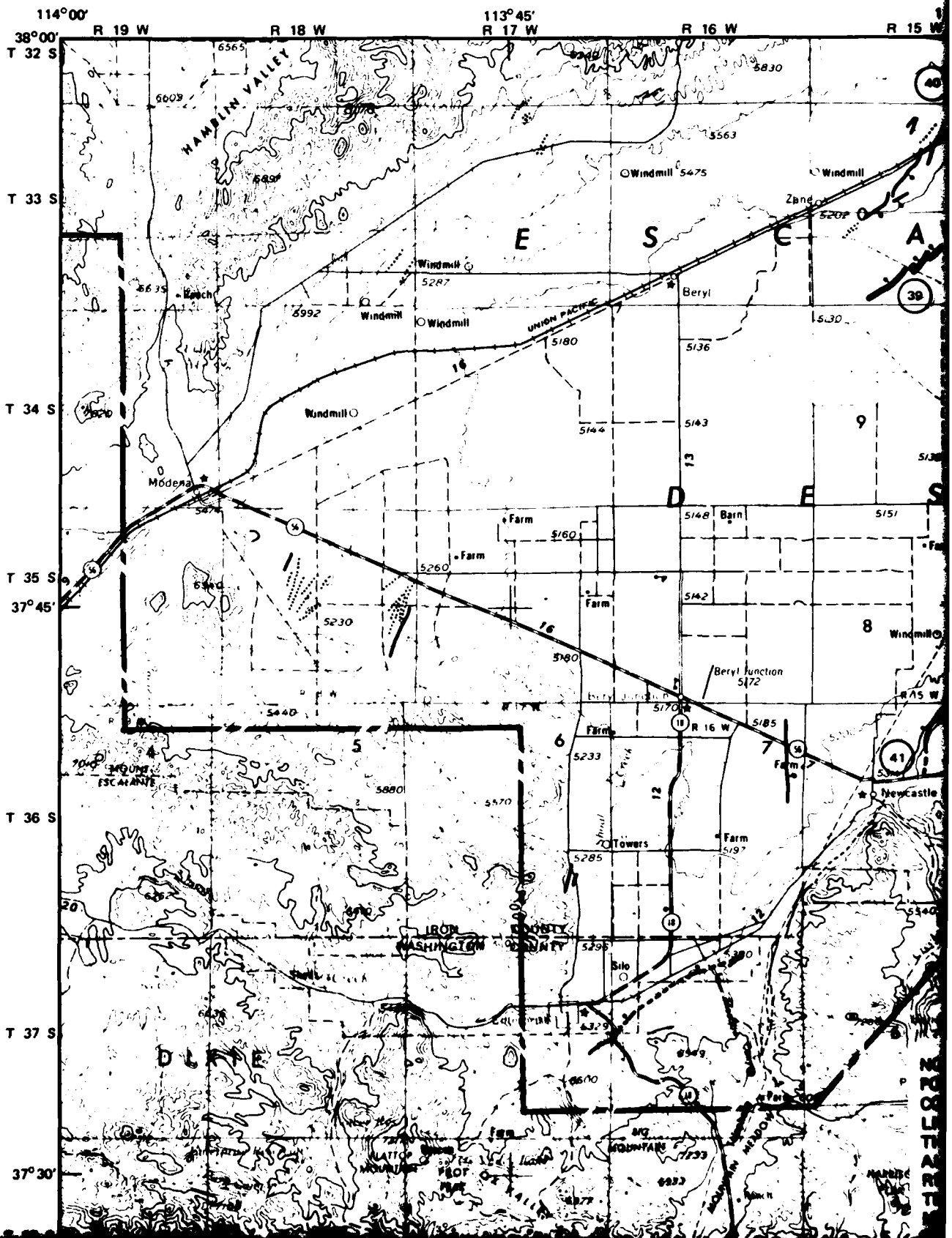


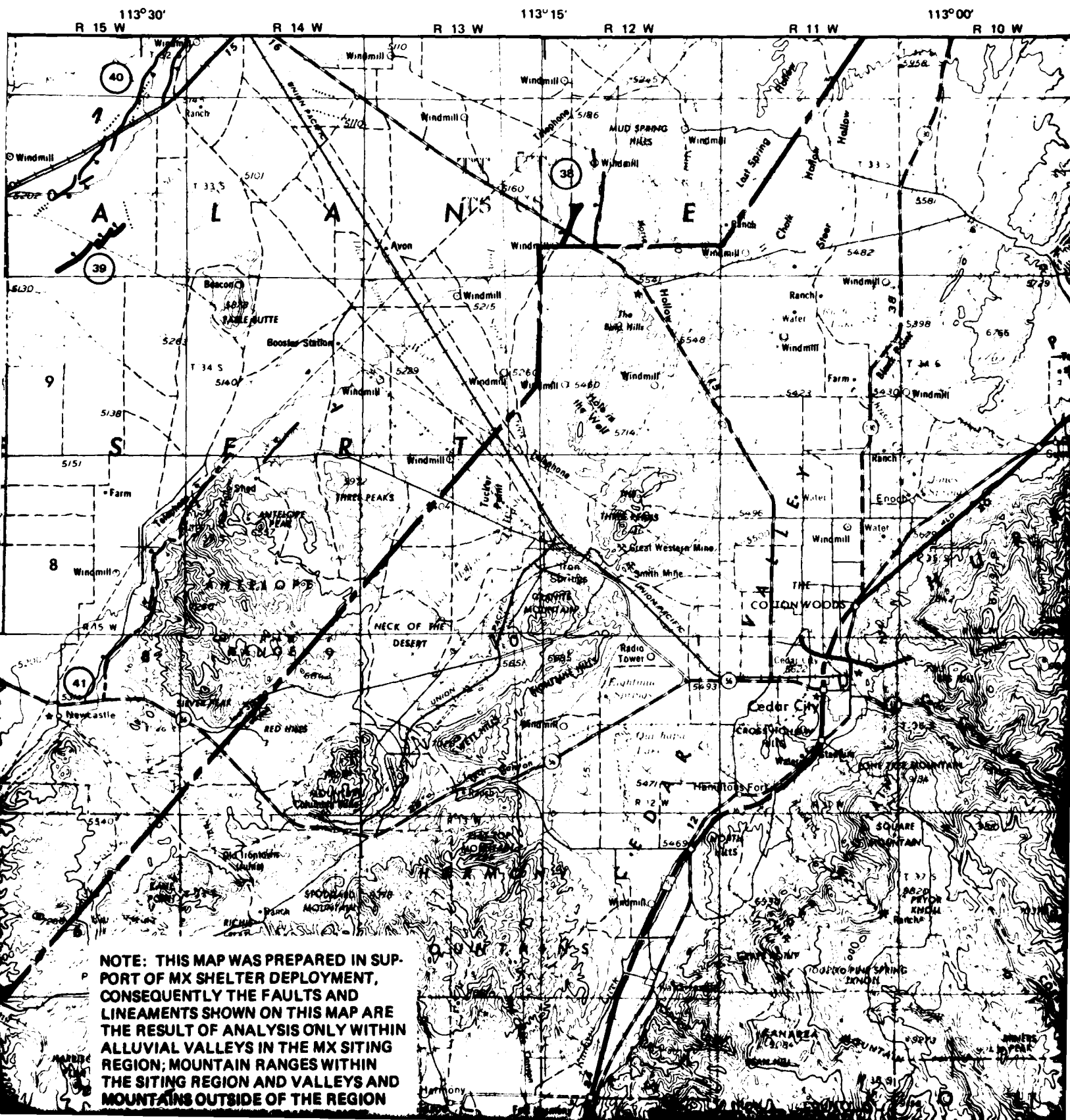
*The Earth Technology Corporation*

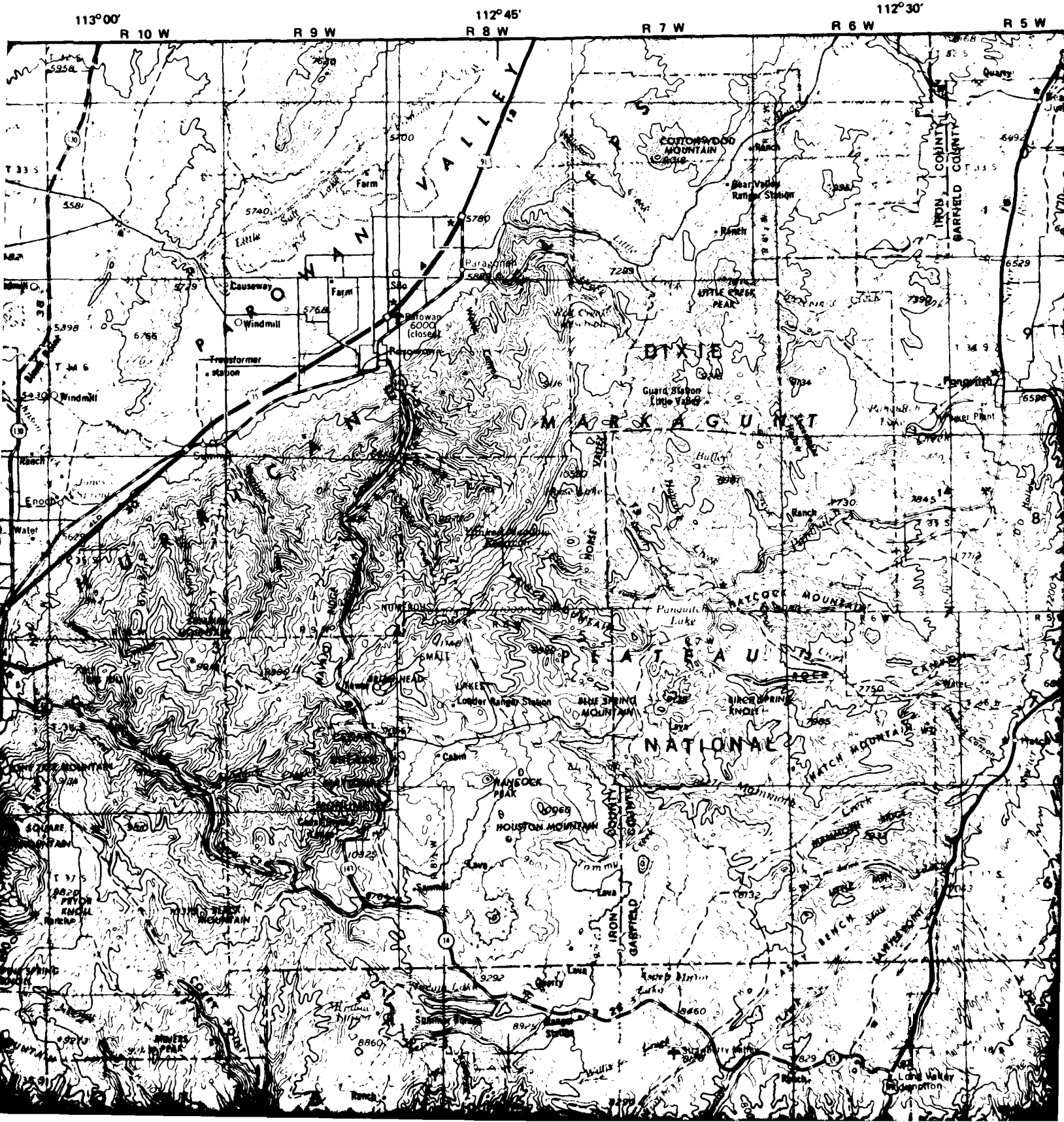
**MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX**

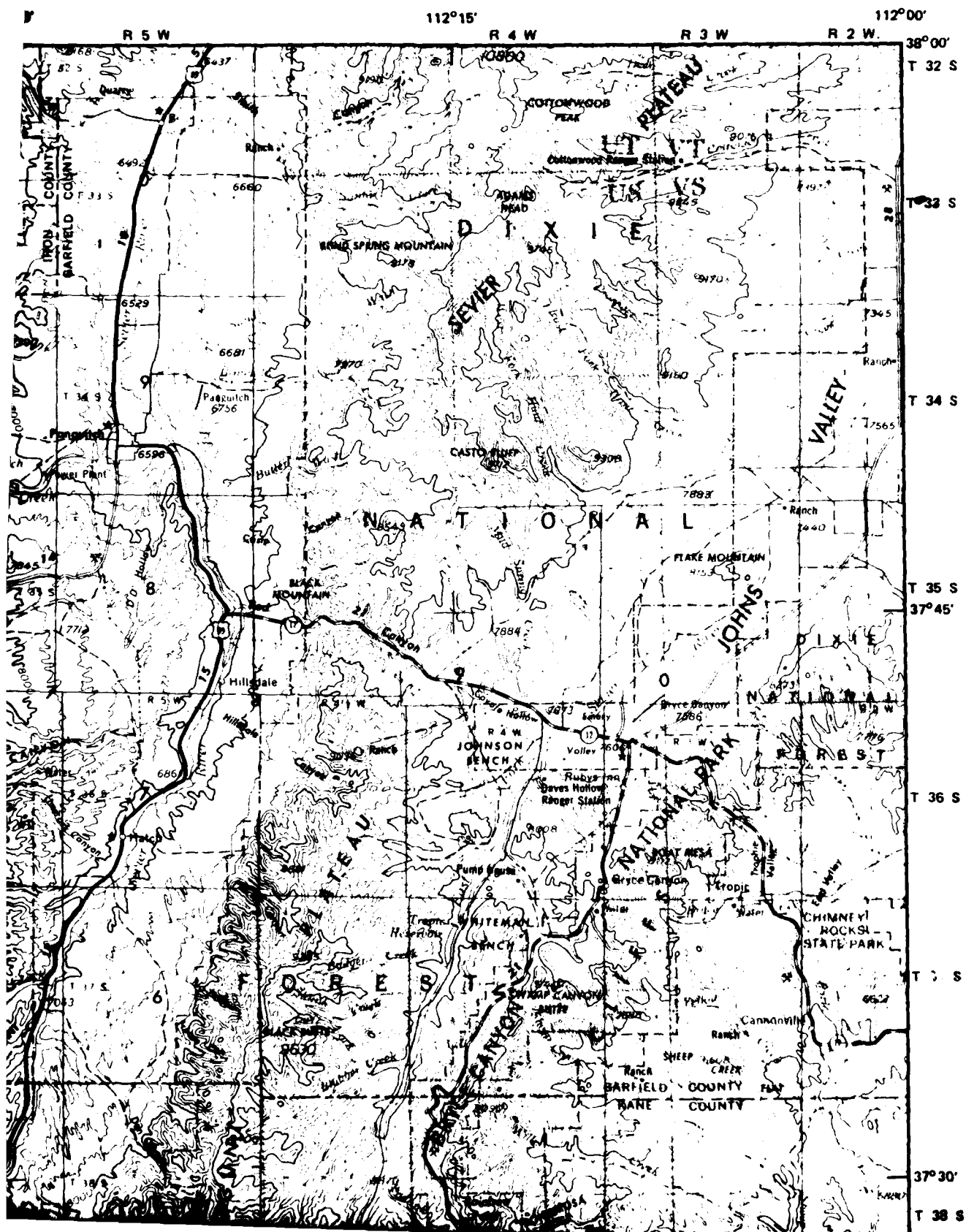
**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEAMENTS, MX SITING REGION  
CALIENTE 1° x 2° QUADRANGLE, NEVADA  
PLATE A9**

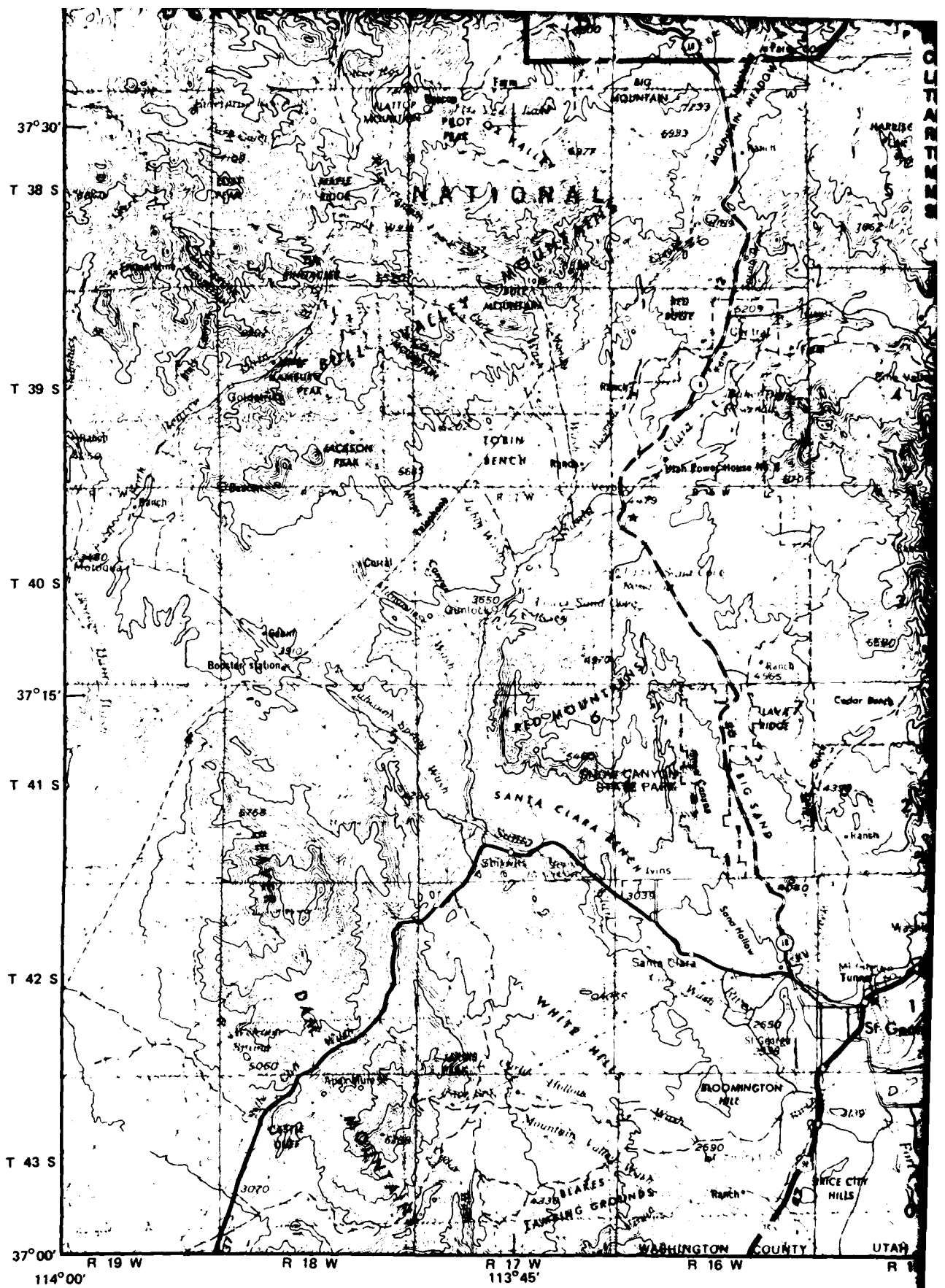










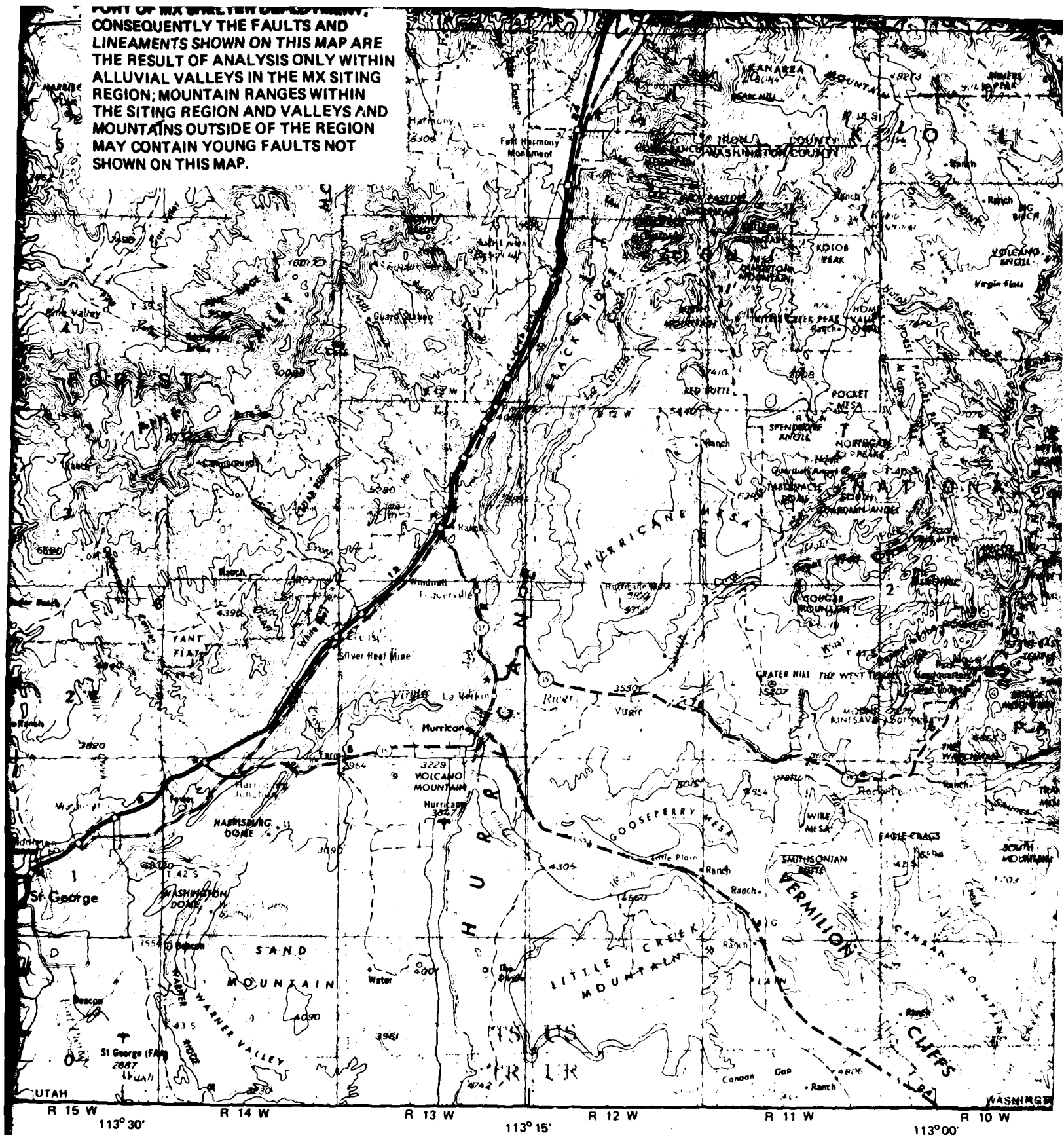


## EXPLANATION

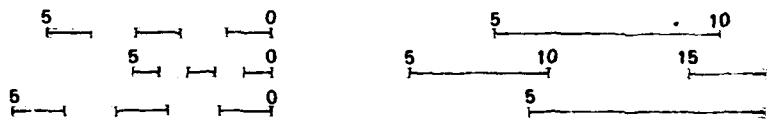


**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp portions of scarp are removed by erosion; dashed line indicates trace inferred between the scarps and (or) presence of lineaments between the scarps. Age of most recent movement

PORT OF MX SHIELD DEPLOYMENT. CONSEQUENTLY THE FAULTS AND LINEAMENTS SHOWN ON THIS MAP ARE THE RESULT OF ANALYSIS ONLY WITHIN ALLUVIAL VALLEYS IN THE MX SITING REGION; MOUNTAIN RANGES WITHIN THE SITING REGION AND VALLEYS AND MOUNTAINS OUTSIDE OF THE REGION MAY CONTAIN YOUNG FAULTS NOT SHOWN ON THIS MAP.



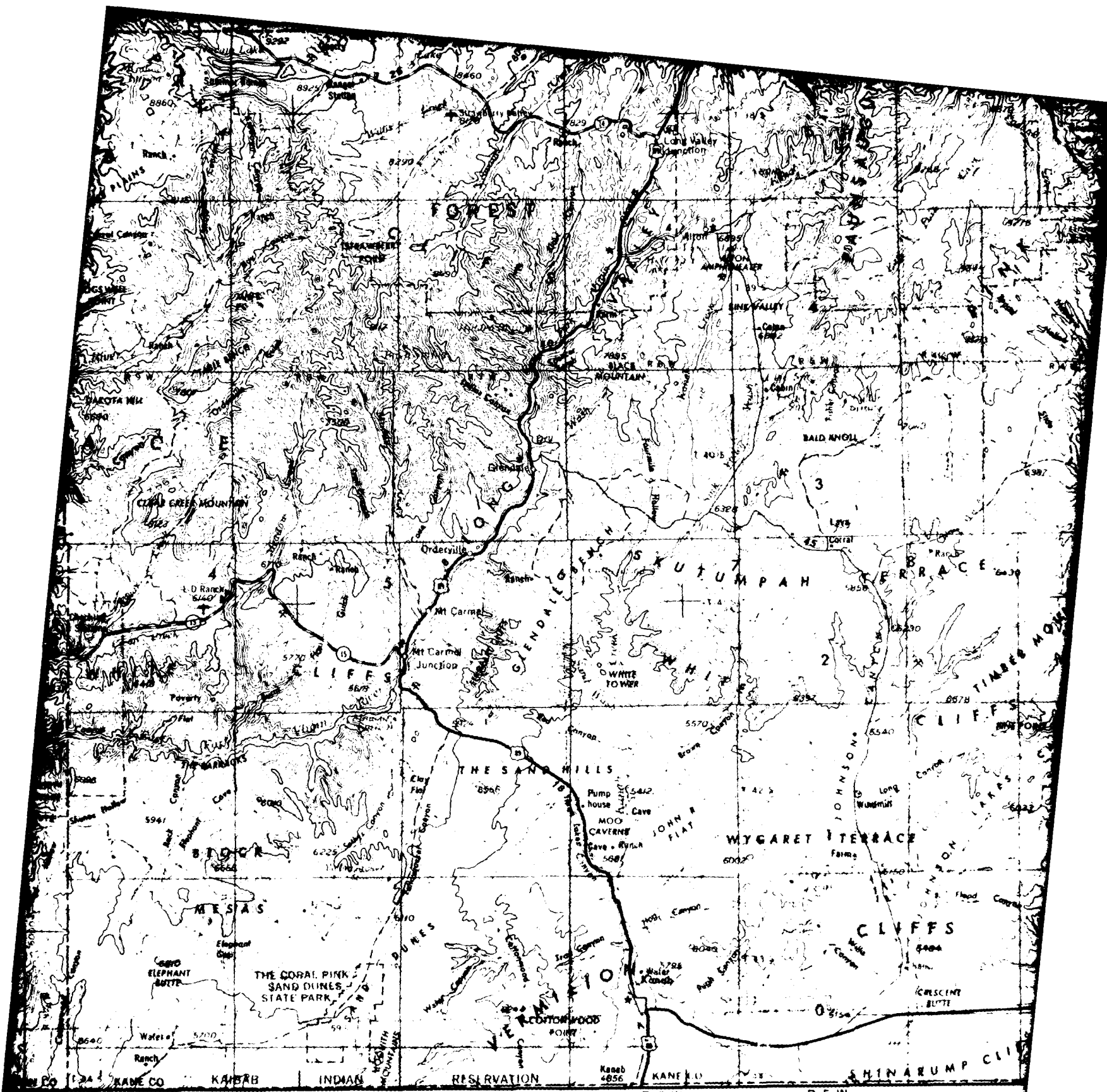
SCALE 1:250,000



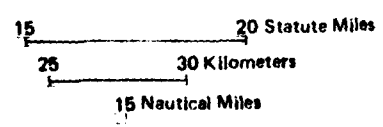
CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FEET  
Base from U.S. Geological Survey, Cedar City Quadrangle  
1:250,000 Transverse Mountain Project

fault scarp except for narrow drainage crossings where small  
between more widely spaced scarps based on alignment of  
movement denoted by line width.





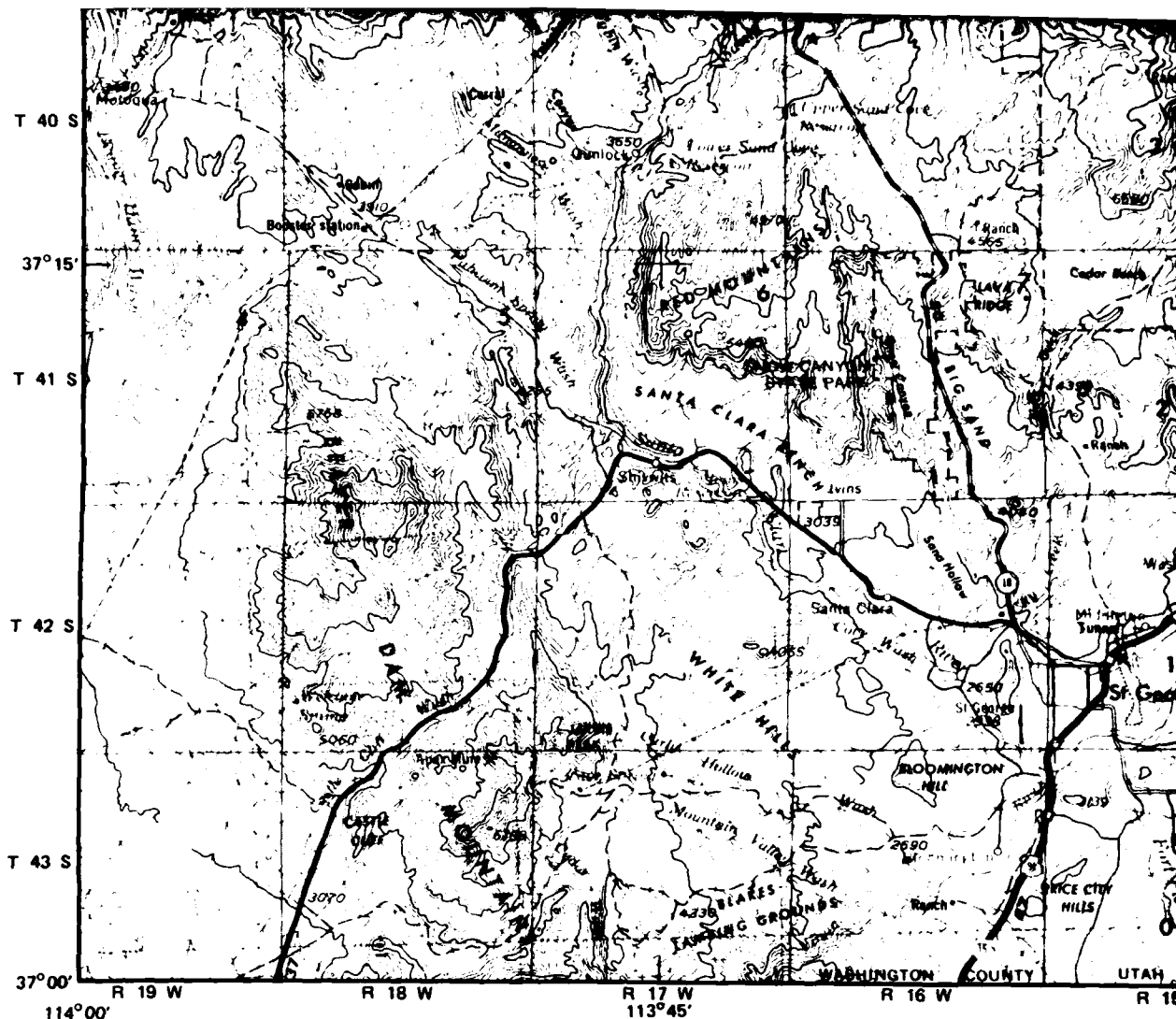
LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES



120°					110°
41°	LOVELOCK	WINNEMUCCA	ELKO	TOOELE	SALT LAKE CITY
	RENO	MILLETT	ELY	DELTA	PRICE







## EXPLANATION



**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp or portions of scarp are removed by erosion; dashed line indicates trace inferred between more scarps and (or) presence of lineaments between the scarps. Age of most recent movement (



Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\approx 15,000$  years).



Pleistocene ( $\approx 15,000$  years to 1.8 million years).



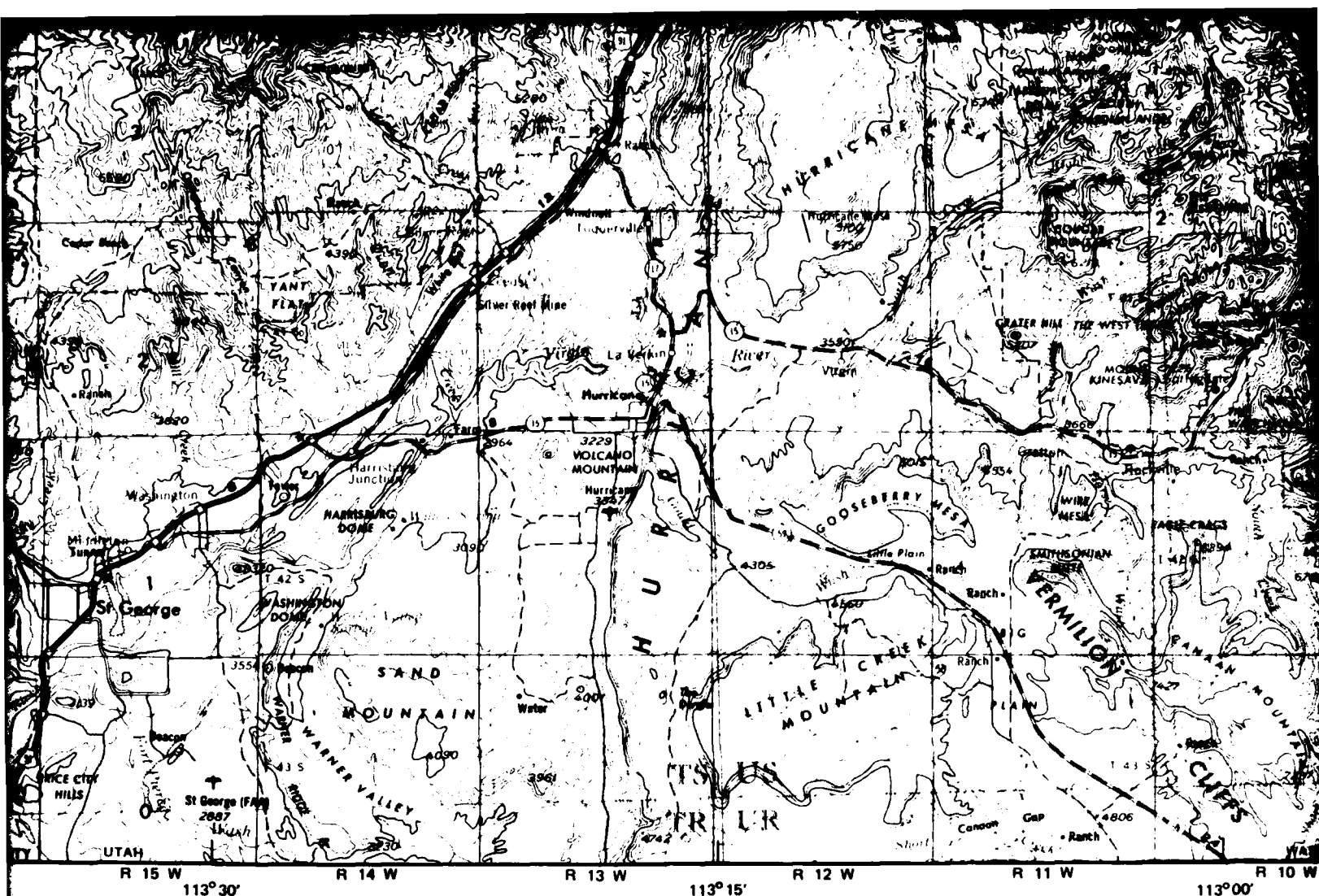
Indeterminate; late Tertiary or younger, probably Quaternary. Scarps are to lack of young stratigraphic units over trace of fault.



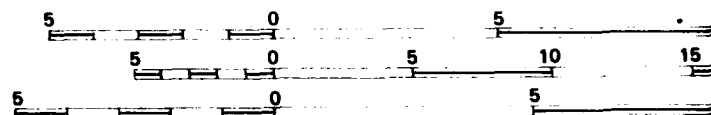
**LINEAMENT:** Vegetation alignments and tonal contrasts without topographic relief; bulk



**APPROXIMATE BOUNDARY OF FAULT-STUDY REGION**



SCALE 1:250,000



CONTOUR INTERVAL 200 FT  
WITH SUPPLEMENTARY CONTOURS AT 100  
Base from U.S. Geological Survey, Cedar City Quad  
1:250,000, Transverse Mercator Projection



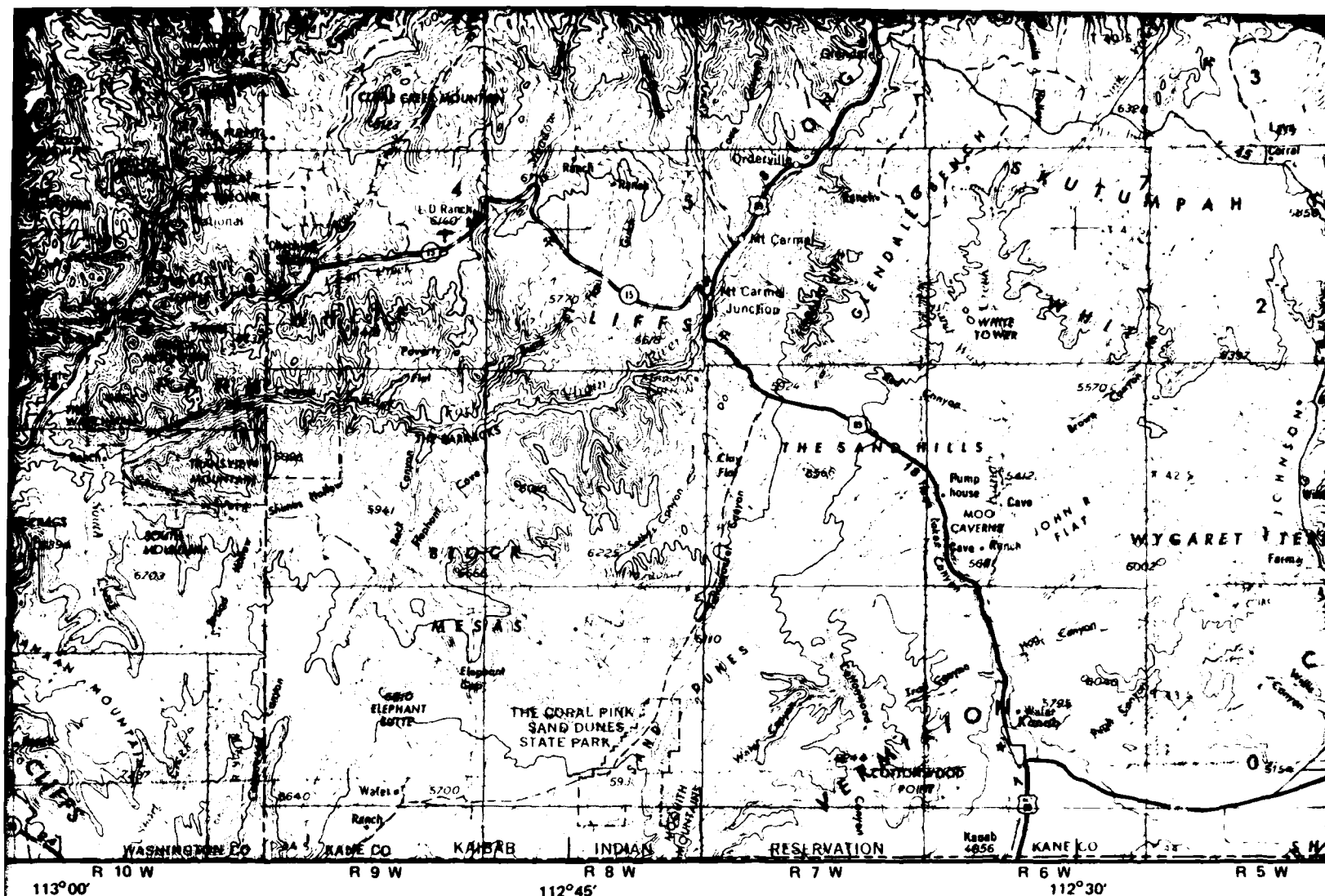
NORTH

ous fault scarp except for narrow drainage crossings where small  
red between more widely spaced scarps based on alignment of  
cent movement denoted by line width.

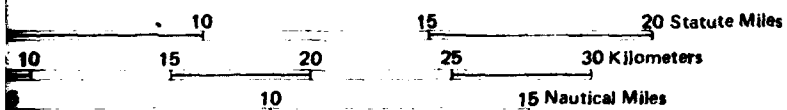
(15,000 years).

mary. Scarps are prominent but age cannot be determined due

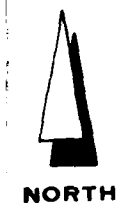
phic relief; believed to be faults or fault-related cracks.



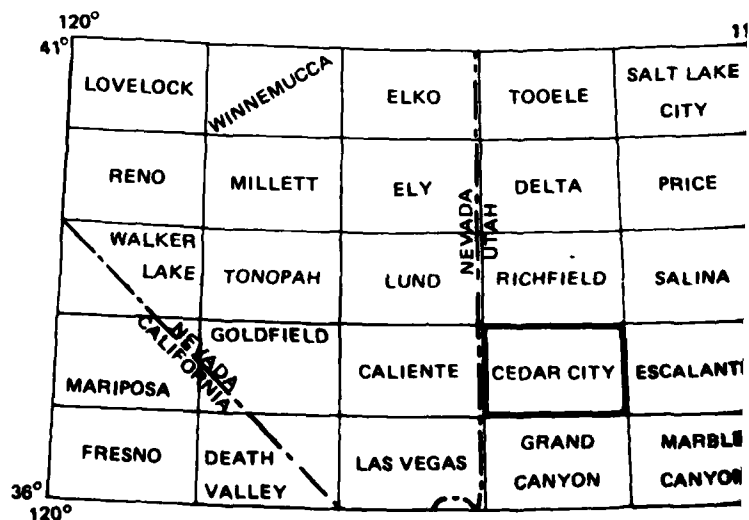
SCALE 1:250,000

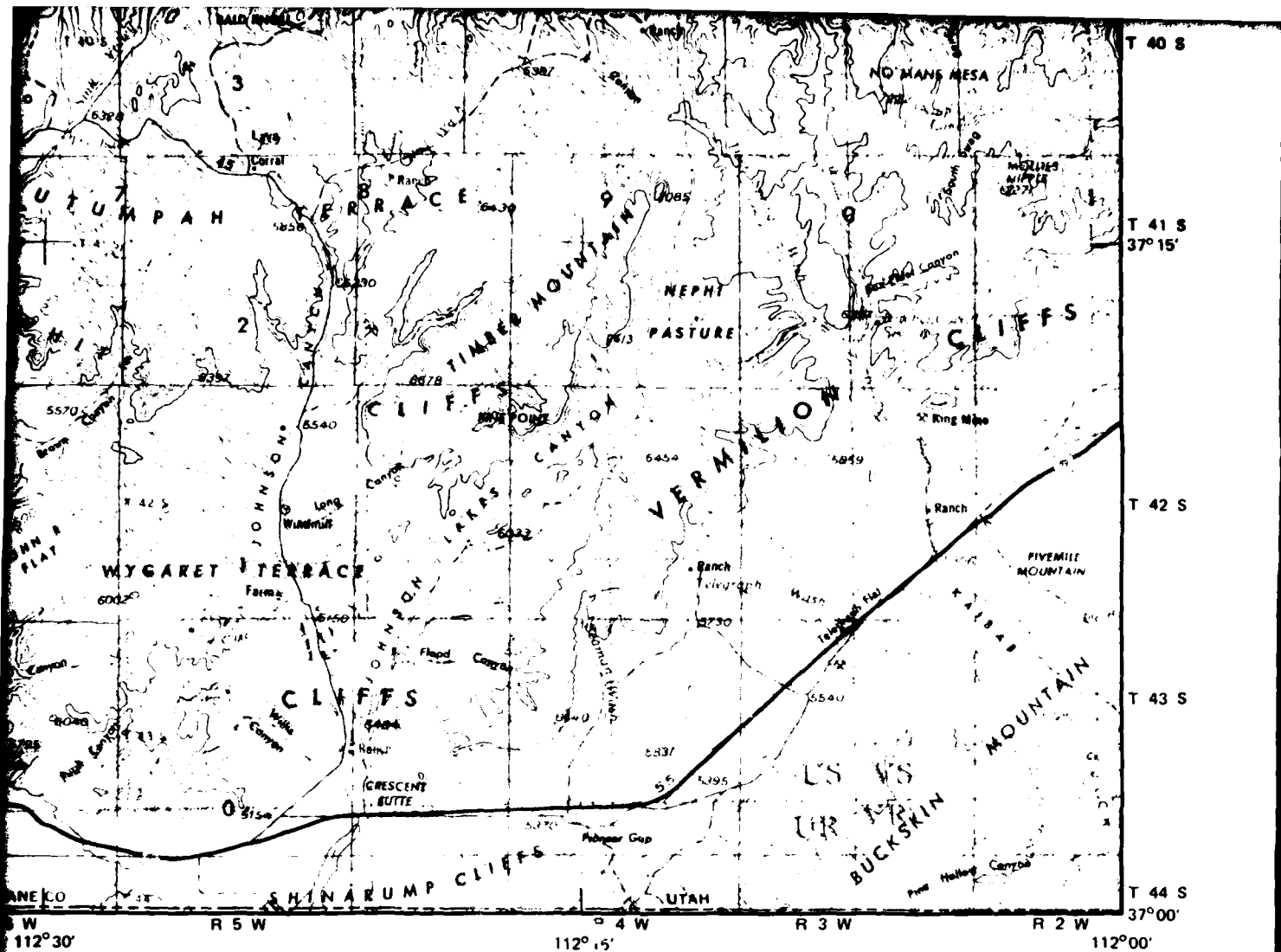


INTERVAL 200 FEET  
CONTOURS AT 100 FOOT INTERVALS  
by Cedar City Quadrangle, Revised 1970,  
Lambert Conformal Conic Projection



LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES





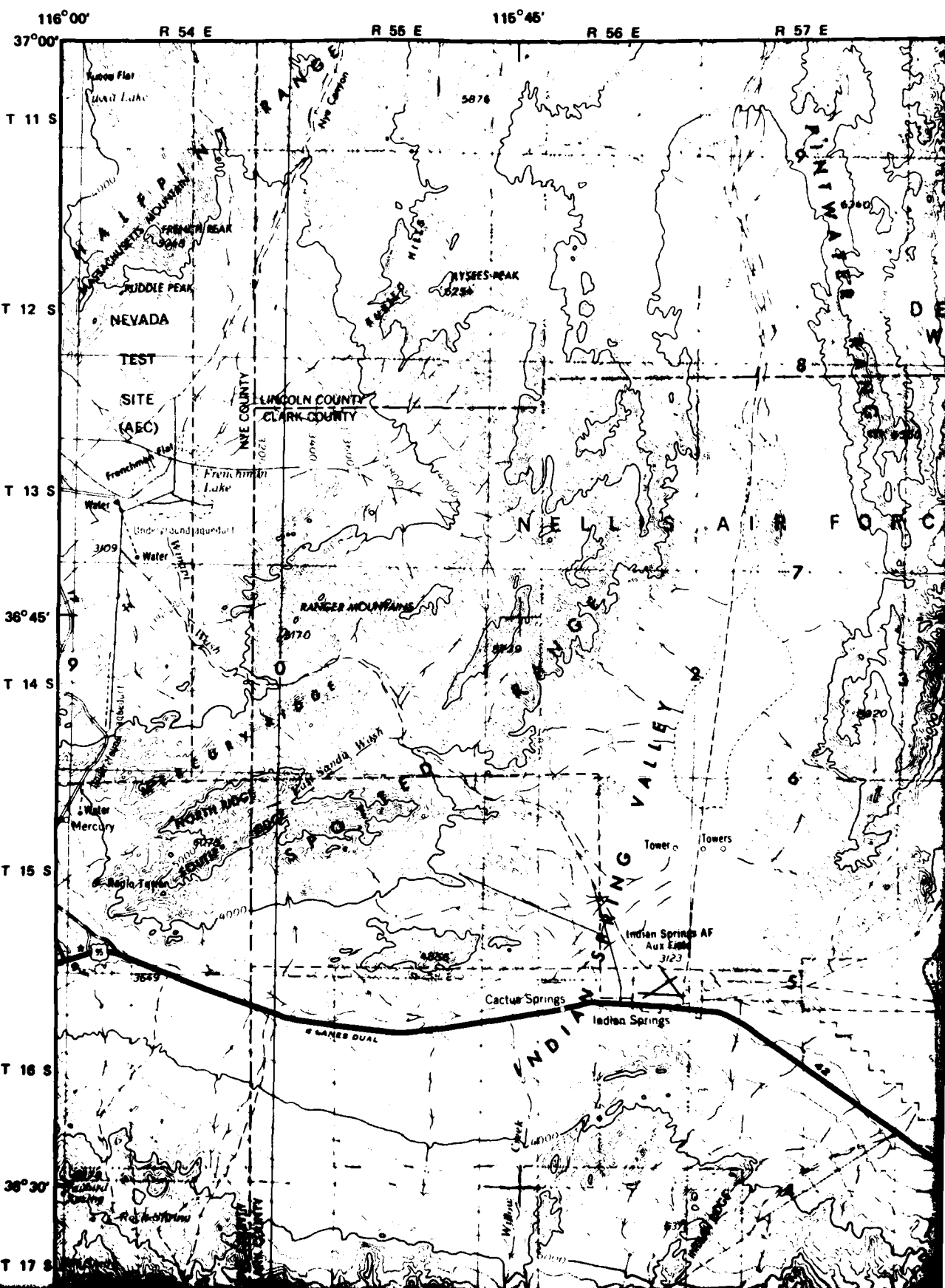
U.S. GEOLOGICAL SURVEY  
QUADRANGLES

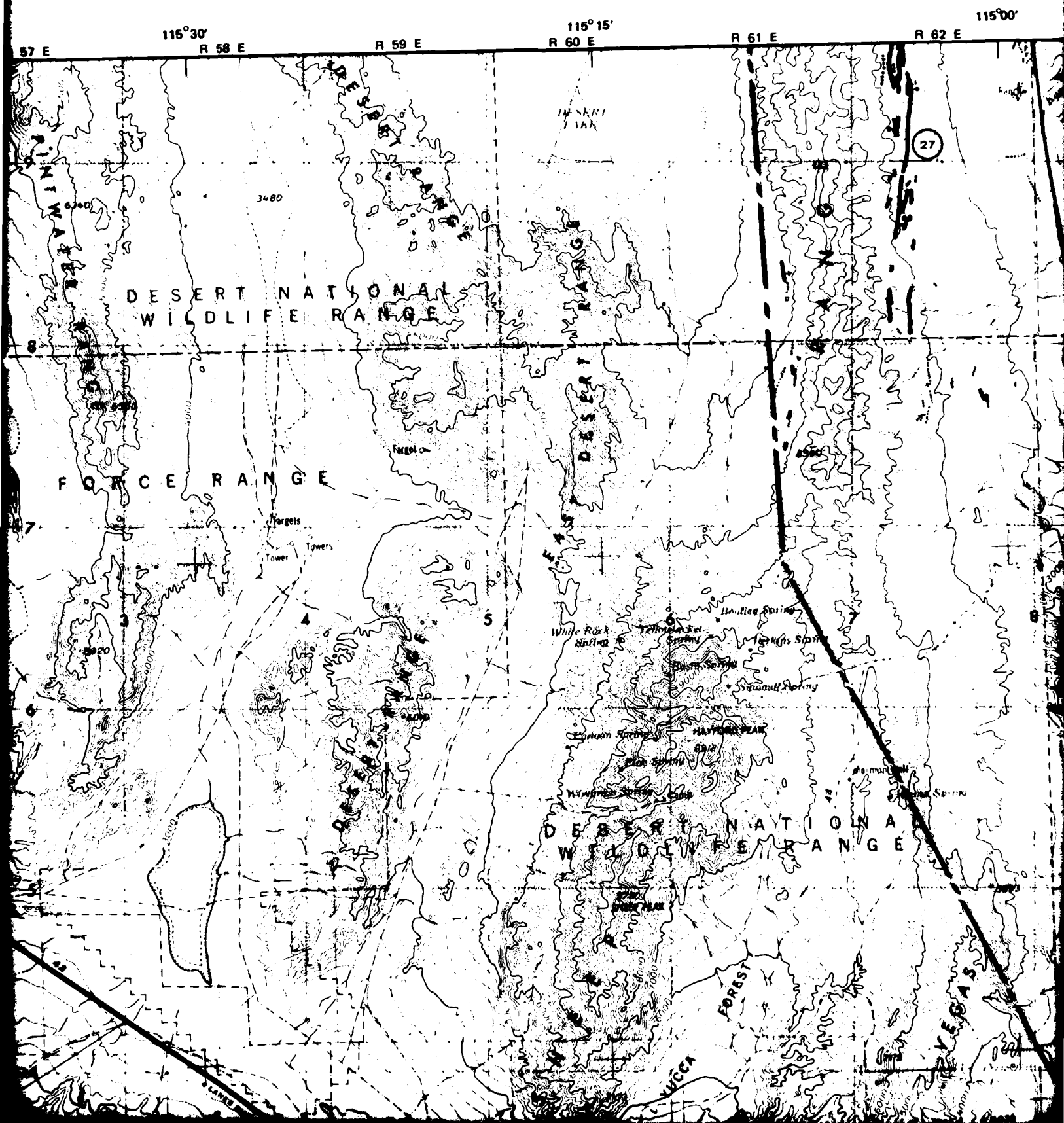
ELKO	TOOELE	SALT LAKE CITY
ELY	DELTA	PRICE
WENDOVER	RICHFIELD	SALINA
SPRINGDALE	CEDAR CITY	ESCALANTE
VEGAS	GRAND CANYON	MARBLE CANYON

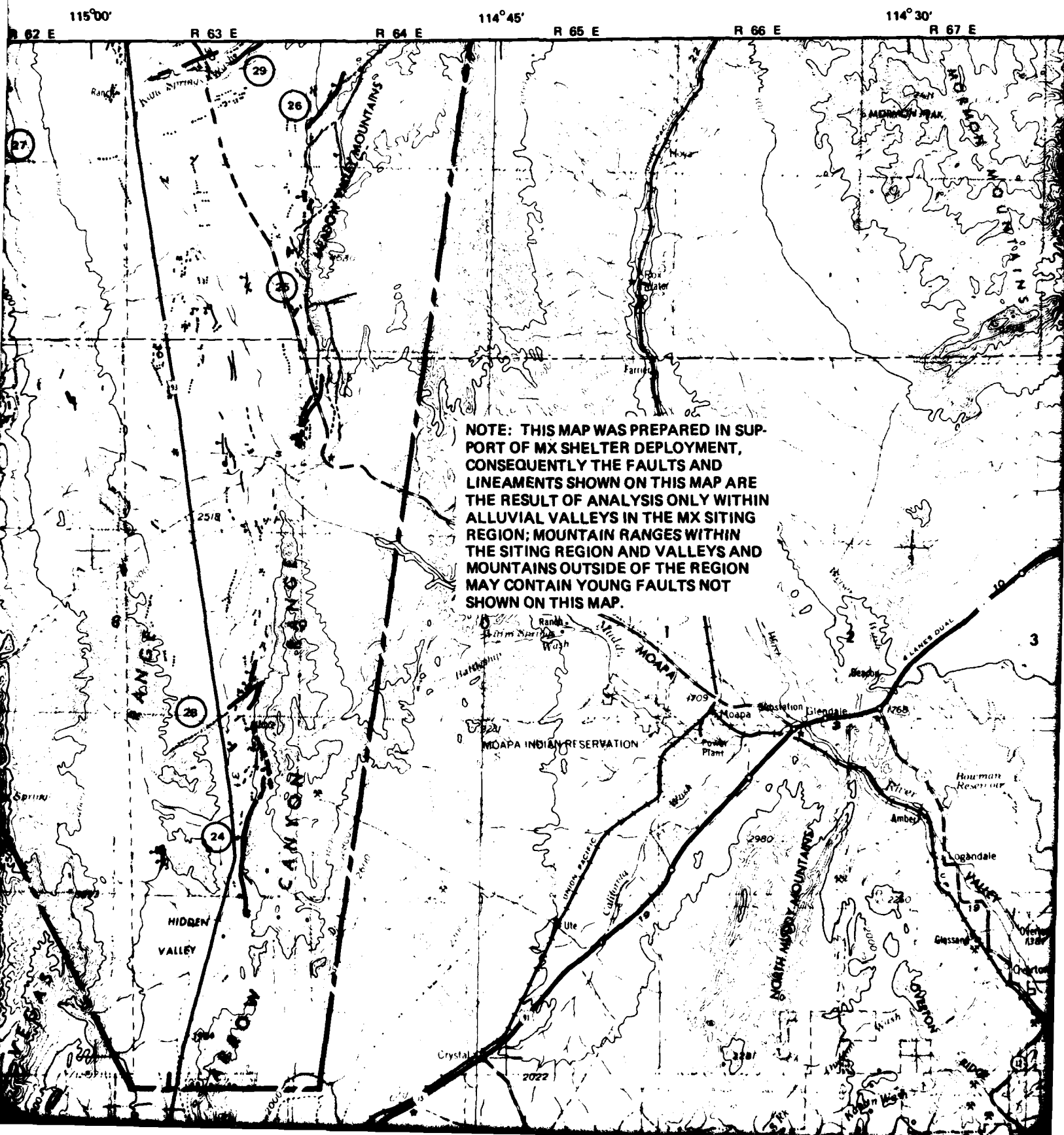
**Ertec**  
The Earth Technology Corporation

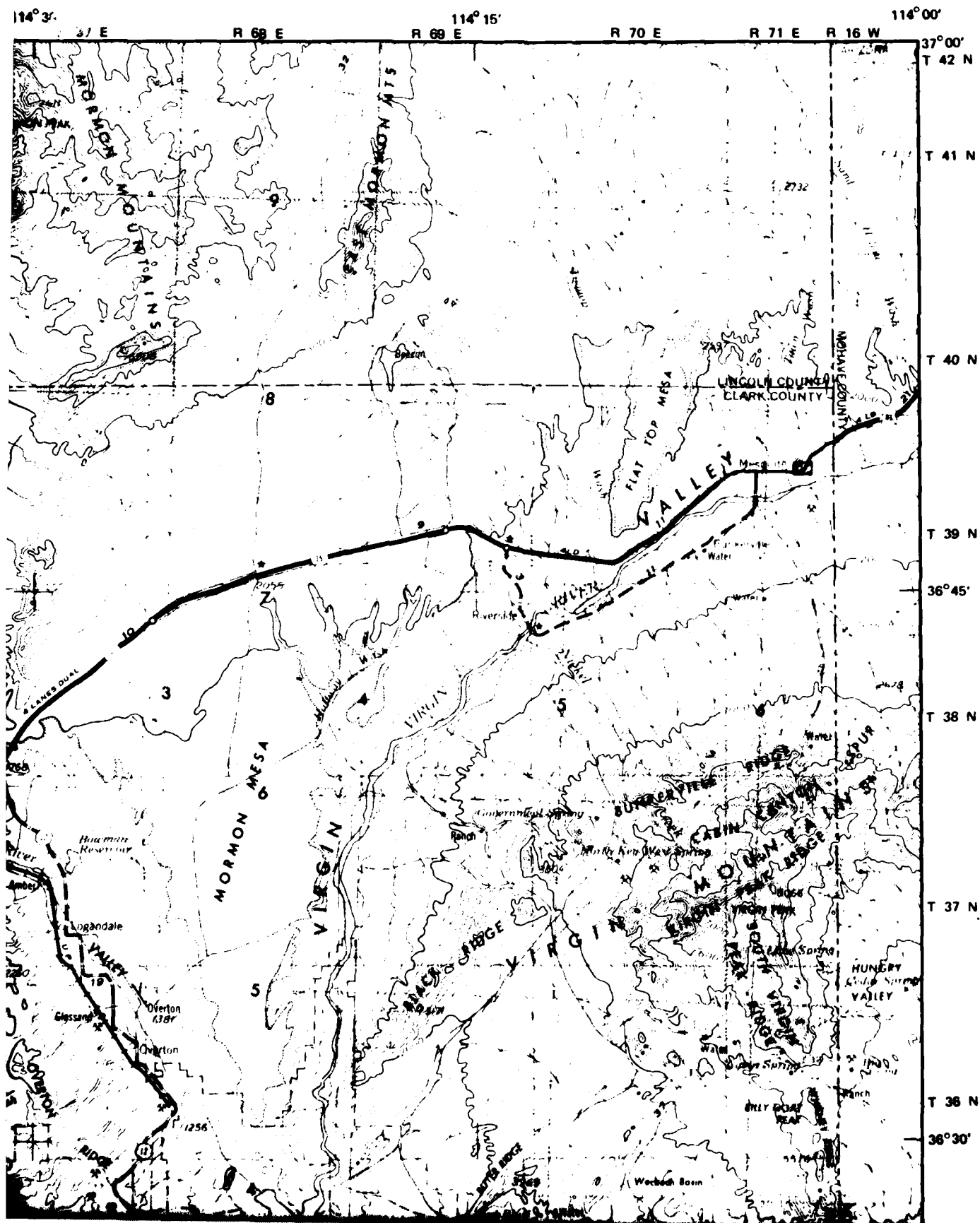
MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX

**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEMENTS, MX SITING REGION  
CEDAR CITY 1° x 2° QUADRANGLE, UTAH  
PLATE A10**

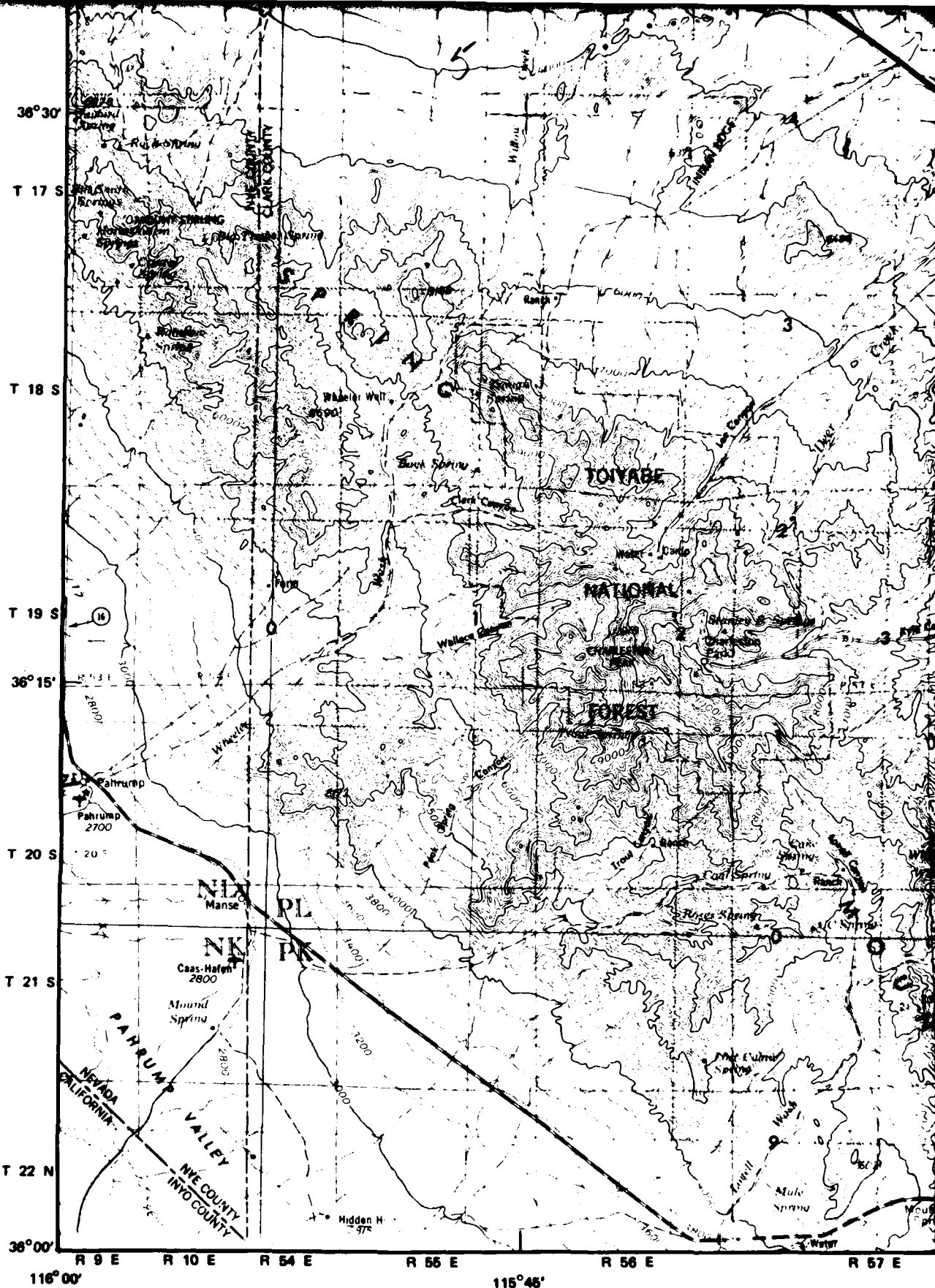












## EXPLANATION

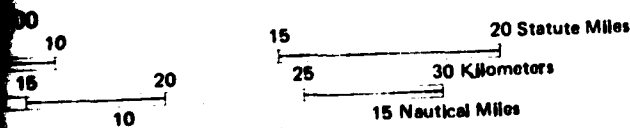


**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp portions of scarp are removed by erosion; dashed line indicates trace inferred between scarp and (or) presence of lineaments between the scarps. Age of most recent movement



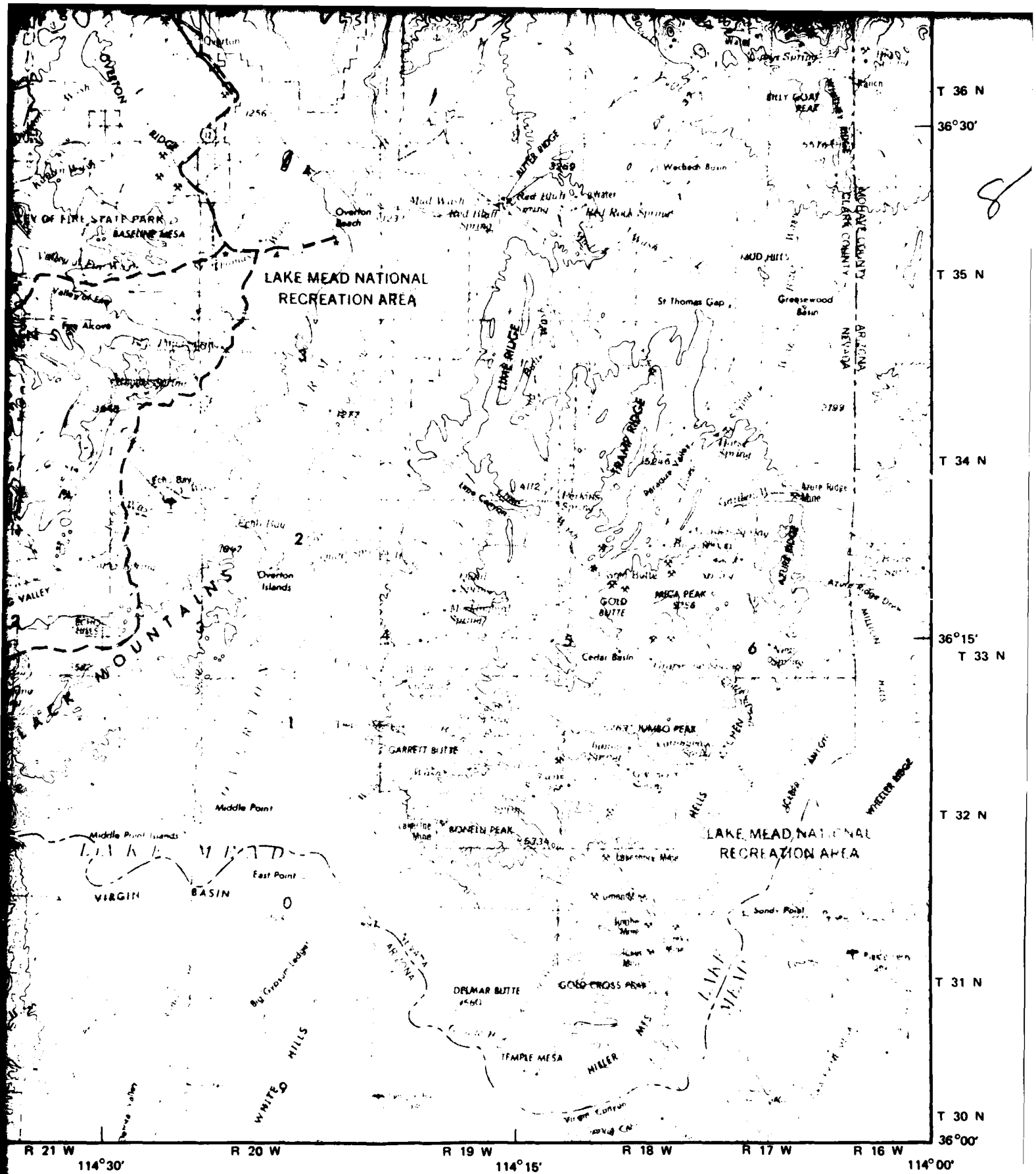


LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
1° x 2° QUADRANGLES



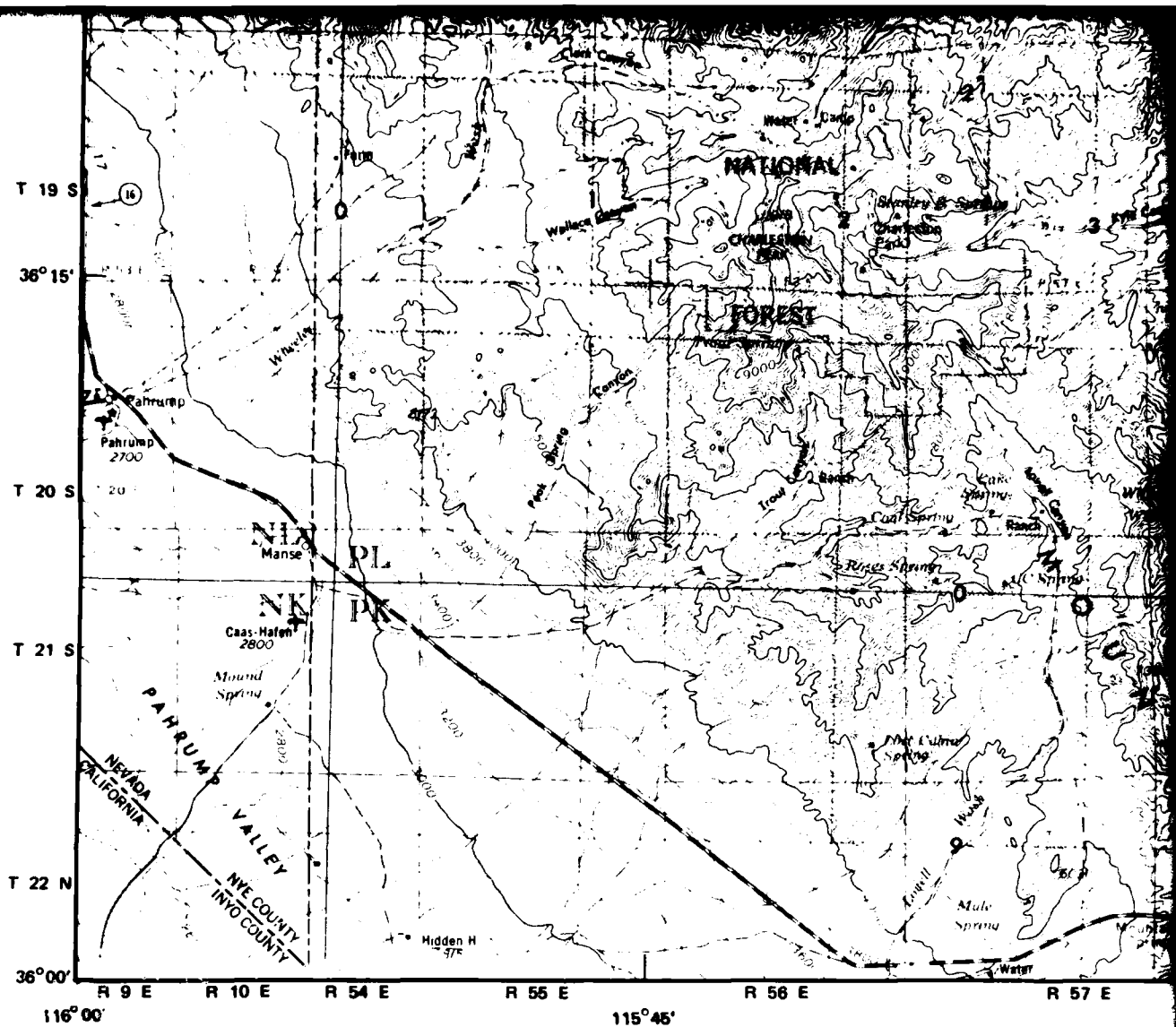
AL 200 FEET  
S AT 100 FOOT INTERVALS  
Vegas Quadrangle, Revised 1969,  
Motor Projection

120°					110°
41°	LOVELOCK	WINNEMUCCA	ELKO	TOOELE	SALT LAKE CITY
	RENO	MILLETT	ELY	DELTA	PRICE
	WALKER				

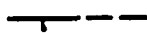


U.S. GEOLOGICAL SURVEY  
2° QUADRANGLES

110° 41'  
SALT LAKE



## EXPLANATION



**FAULT:** Tick mark is on down dropped side. Solid line indicates continuous fault scarp and portions of scarp are removed by erosion; dashed line indicates trace inferred between most scarps and (or) presence of lineaments between the scarps. Age of most recent movement of

Post Bonneville and Lahontan Pluvial-Lake Highstand ( $\leq 15,000$  years).

Pleistocene ( $\approx 15,000$  years to 1.8 million years).

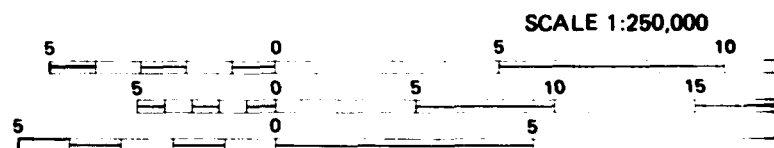
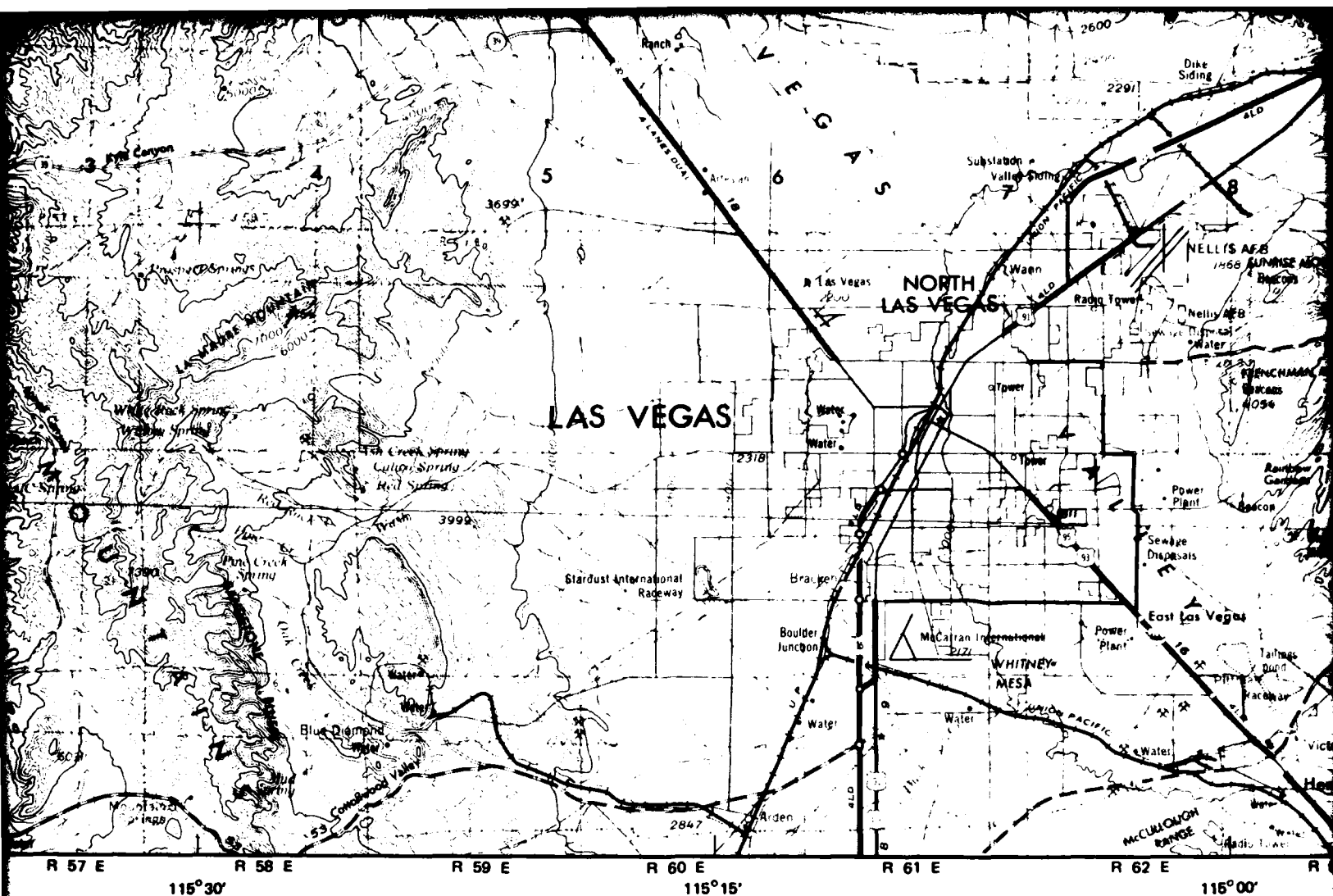
Indeterminate; late Tertiary or younger, probably Quaternary. Scarps are lack of young stratigraphic units over trace of fault.



**LINEAMENT:** Vegetation alignment and tonal contrasts without topographic relief; better



**APPROXIMATE BOUNDARY OF FAULT-STUDY REGION**



vious fault scarp except for narrow drainage crossing where small  
 erred between more widely spaced scarps based on alignment of  
 recent movement denoted by line width.

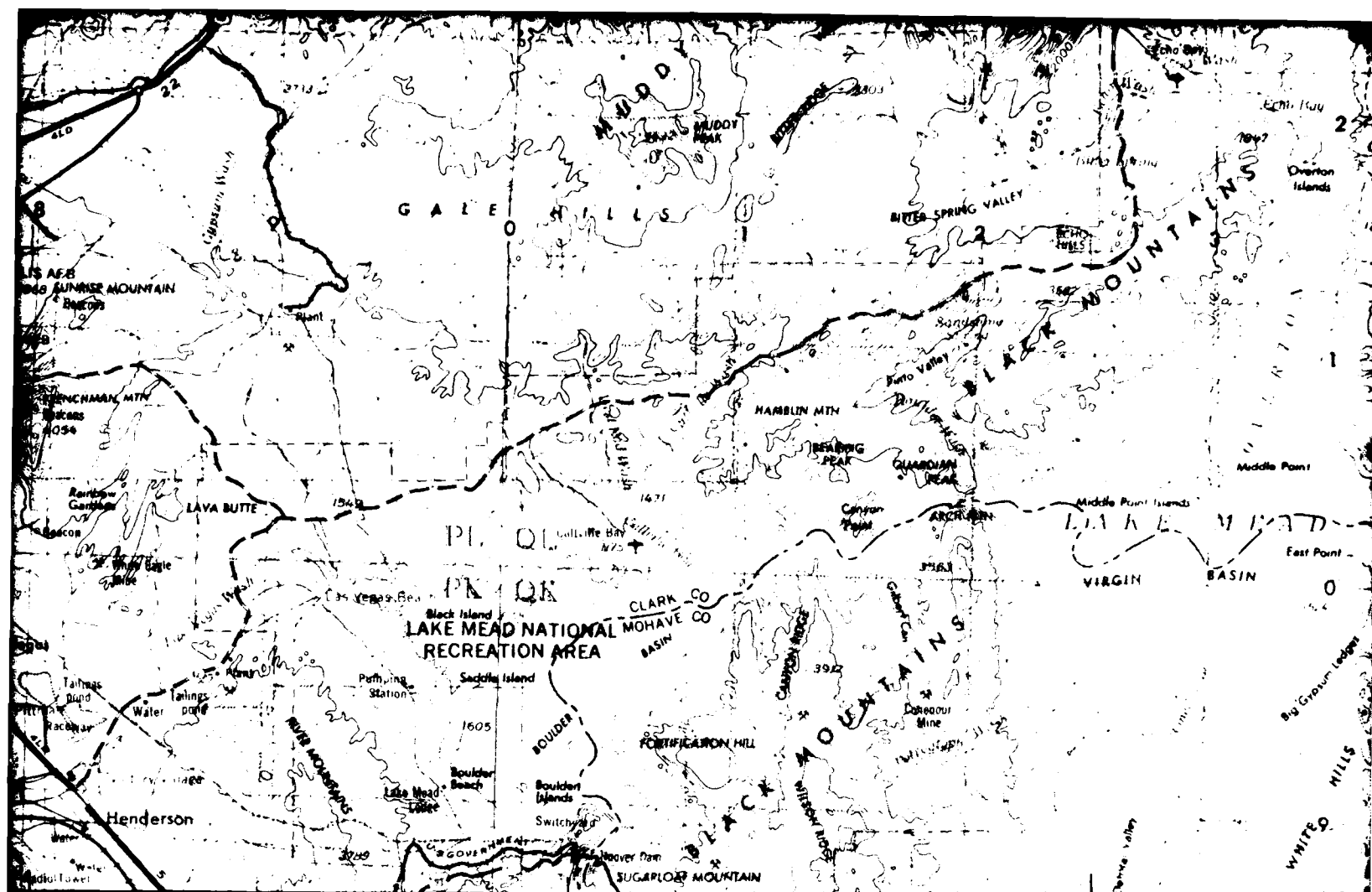
≤ 15,000 years).

ary. Scarps are prominent but age cannot be determined due to

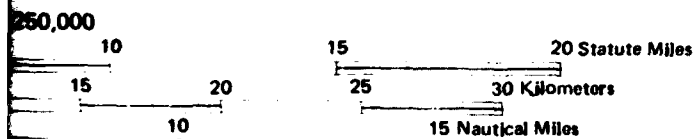
aphic relief; believed to be faults or fault-related cracks.

CONTOUR INTERVAL 200 FEET  
 WITH SUPPLEMENTARY CONTOURS AT 100 FEET  
 Base from U.S. Geological Survey, Las Vegas Quad  
 1:250,000, Transverse Mercator Projection



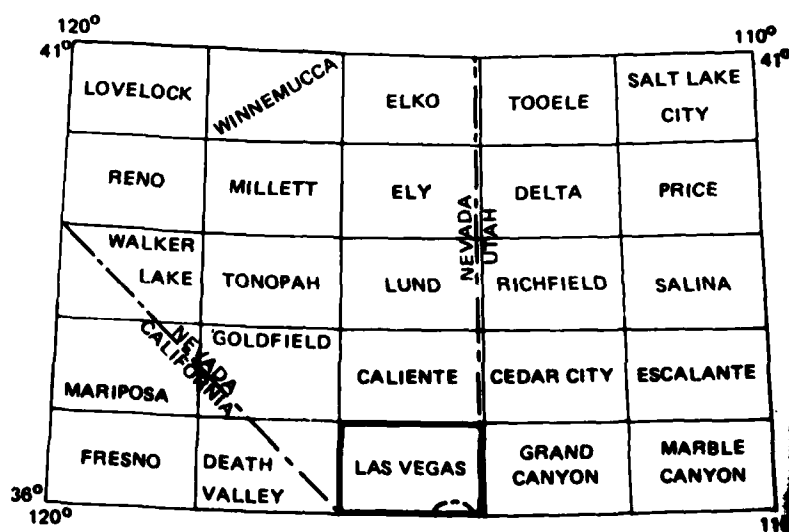


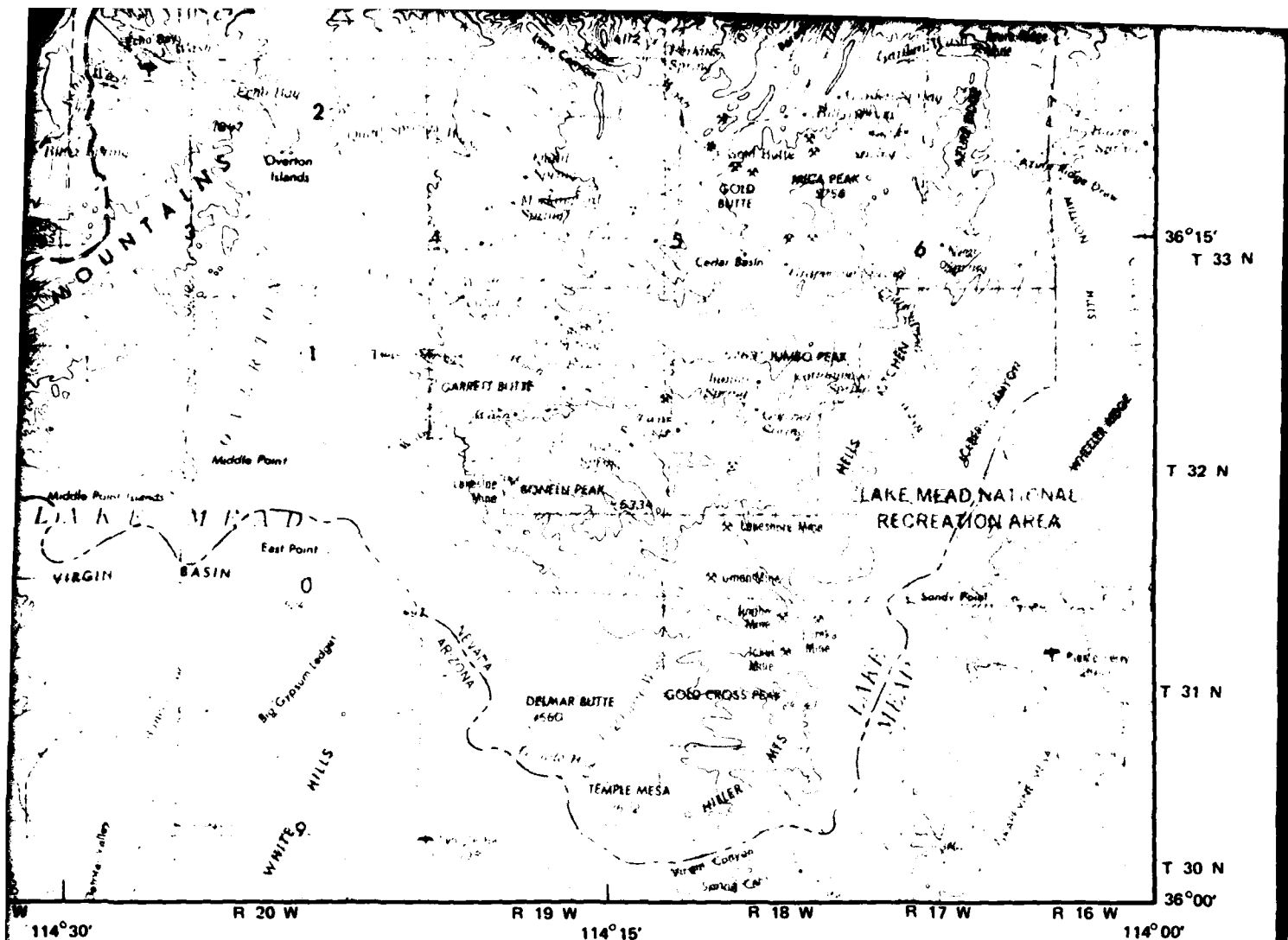
R 63 E R 64 E R 23 W R 22 W R 21 W R 20 W  
 114°00' 114°45' 114°30'



LOCATION DIAGRAM OF U.S. GEOLOGICAL SURVEY  
 1° x 2° QUADRANGLES

INTERVAL 200 FEET  
 CURVES AT 100 FOOT INTERVALS  
 Las Vegas Quadrangle, Revised 1969,  
 Mercator Projection





U.S. GEOLOGICAL SURVEY  
QUADRANGLES

LKO	TOOELE	SALT LAKE CITY
ILY	DELTA	PRICE
UND	RICHFIELD	SALINA
ENTE	CEDAR CITY	ESCALANTE
VEGAS	GRAND CANYON	MARBLE CANYON

**Ertec**  
The Earth Technology Corporation

MX SITING INVESTIGATION  
DEPARTMENT OF THE AIR FORCE  
BMO/AFRC-MX

**PRELIMINARY MAP OF YOUNG FAULTS  
AND LINEAMENTS, MX SITING REGION  
LAS VEGAS 1° x 2° QUADRANGLE, NEVADA  
PLATE A11**



